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OF THE

Royal Caledonian Horticultural Society

WITH WHICH IS INCORPORATED THE

Scottish Horticultural Association

VOL. V.—PART 2

(SESSION 1934)

MAURICE G. KIDD, B.L., W.S.
EDITOR

EDINBURGH
1935

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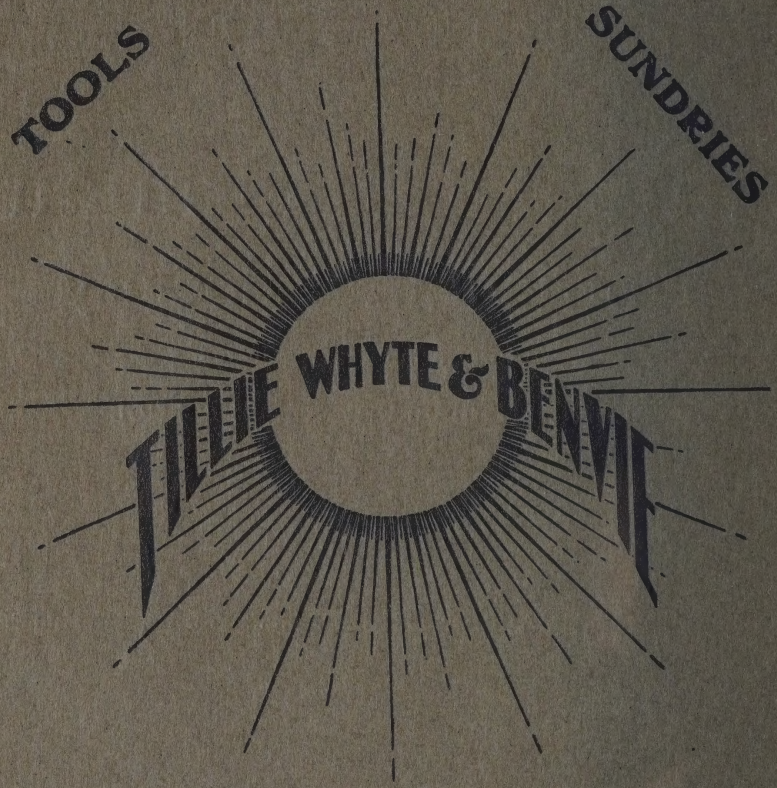

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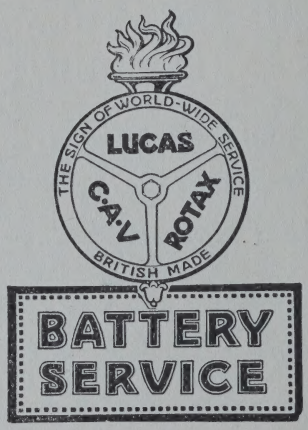

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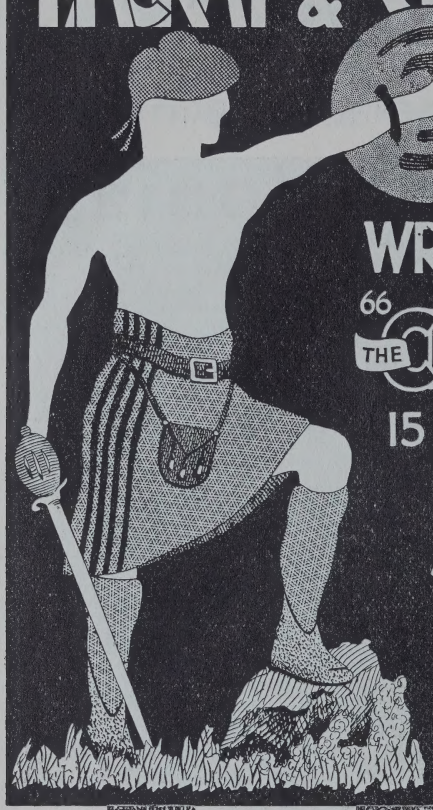

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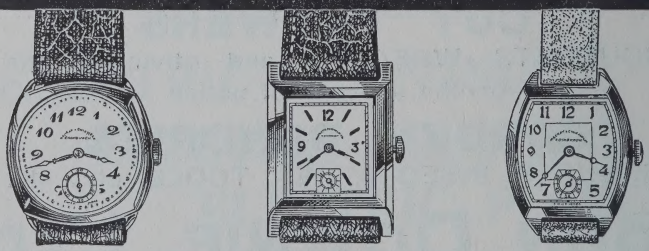

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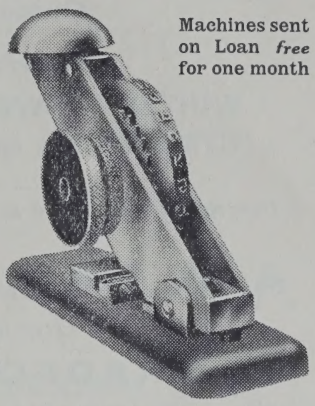

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The Council particularly urge that the membership be maintained, and invite all interested in horticulture to join the Society.

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SESSION 1934

7.—PRESIDENTIAL ADDRESS.[1]

By Mr W. H. THOMSON, Clovenfords.

IT would, indeed, be strange if it were not a matter of pride and interest to me to hold the office of President, and to be anxious to do my small part in the work and usefulness of a Society whose main object is to promote a love for gardening. I am proud to remember that both my grandfather and granduncle were practical gardeners, who began at the bottom of the ladder and made their own way to success in their chosen career. It may be of interest to state that, while gardener at Dalkeith Palace, my grandfather was one of the founders and Chairman of the Horticultural Society of Edinburgh, which was founded in 1858 and amalgamated with this Society in November 1865; he was also a President of the Scottish Horticultural Association, now also incorporated with this Society; and he was also for many years a Member of Council and a very warm supporter at all times of this Society, and was rarely absent from its meetings and exhibitions, as some of the older members may recall. He was also honoured by this Society as being one of the first recipients of the Neill prize in 1865, so that I cannot help being gratified in being asked, as it were, to carry on a long and very pleasant family association with the work and interests of the Royal Caledonian Horticultural Society.

[1] Address delivered at the Annual General Meeting, 10th January 1934.

While thinking of these old and, to me, very interesting connections, I had cause to refer to a possession I value highly, which is a manuscript book left by my grandfather in which he has jotted down many memoirs and recollections of his early days and of his life and times, and of the many famous gardeners and gardens he had known. I ventured to think that it might be of interest for the few minutes at our disposal this evening, if I were to draw, as it were, a few little sketches showing briefly the life and conditions of a young gardener setting out on his life's work in these early days of horticulture, now over a hundred years ago, so that we might mentally contrast them with the conditions, ways and advantages of this present time. In doing so, if I have to introduce some little family history and some extraneous matter which cannot be expected to interest you, I trust you will forgive me.

Take first a little picture of a Border family in 1818—my great grandfather, a David Thomson, was land steward for twenty-one years to Mr Carre, of Cavers, in Roxburghshire. When Mr Carre died the estate was broken up, and in May 1818, through the influence of the great Sir Walter Scott, to him a good and kind friend, as, indeed, he was to all around him whatever their position in life—through Sir Walter's recommendation, this David Thomson secured the position of land steward to Mrs McLean Clephane, of Torloisk in Mull, who was anxious to secure a man able to introduce better methods of agriculture, then in a very backward state. The wage agreed upon may interest you—£30 a year, a cow's grass, firing, vegetables from her garden, potatoes, meal, and liberty to fat a heifer every year for its mart. They left Cavers in two carrier's carts and in three days reached Glasgow. From there a small sloop of 20 tons was hired to take them, their luggage, carts, harrows, etc., to Mull. They sailed from the Broomielaw, and after colliding with a small steamer named the "Comet" and running on a sandbank, where they had to remain till the tide rose and floated them off, in eight days and nights they got to Mull. Just compare this journey with our present luxurious steamer, rail and motor transport facilities. The future gardener, Wm. Thomson, was then four and a half years old, and he used to tell us he remembered incidents of the journey quite well. He has much of interest to tell of the conditions of the Highlands at the time, the backward state of agriculture, and the

many quaint and curious ways and superstitions of the people, but that is another story.

My second picture would be of a Highland school in 1821 at a hamlet called Fanmore, where the boy received his education. A poor, dry stone building, thatched with turf, with an earthen floor, the peat fire in the middle of the floor on some flat stones. No forms or desks of any kind—the only seats being large stones carried in by the bigger boys and ranged round the walls. On wet days, and it is often wet in Mull, the water poured through the roof, and the old master, Neill MacPhadyen, used to set the most ingenious boy to make gutters in the floor and conduct the water to the door. As the roof was black with smoke and soot, my grandfather tells how the black drops from it spoilt the few books they had, and how they used to hold their bodies over the books to try and shield them. I have still some of his school books showing the brown marks all over them.

When he went there first not a boy in the school could speak English, and he soon spoke the Gaelic himself like a native, but the master was exceedingly anxious that the others should learn English, so that he used to act as a kind of interpreter. No holidays except New Year's day and the fast days, and at school on Saturday till 2 P.M. He says it was very hard on them and they suffered from headaches in a hot unventilated building, as he adds, at that period it was not even suspected that fresh air was of any advantage to human beings. He tells that in later days a somewhat better building was provided with a slate roof and earthen floor. Letters were brought by one of the boys from Aros, ten miles away, once a week.

He got a good grounding in the three R's, some algebra, geometry and trigonometry—they had no books or maps for geography, and he laments he could get no Latin. That and many other subjects he studied in after life, and, indeed, both he and his brother David, afterwards gardener at Drumlanrig, were studying and learning to the very end of their days, and he was never tired of impressing on us boys how our real education only began on leaving school, and urging us to acquire every kind of useful knowledge. Compare that early Highland school of 1821 with the present substantial and comfortable buildings, with every attention paid to lighting, heating and ventilation, and think of the countless advantages the modern boy possesses in up-to-date beautifully printed text

books, highly qualified teachers, lessons by wireless, educational films, and the whole vast curriculum of modern education.

My third picture is of the budding gardener setting out in the year 1828, at the age of thirteen, for his first place, under Mr Geo. Wilson, gardener to Mr McLean of Coll, who had then purchased the estate of Drimfin, near Tobermory, and where much planting, building and garden making was at that time going on. At Drimfin he remained four years, three as apprentice and one as journeyman, gaining considerable experience in kitchen gardening, planting and keeping of men's time and books, which was one of his duties, and general country work; he states he had to work very hard, and for a growing youth was half starved in a wretched bothy. At that time, he mentions, they had but a limited selection of plants to cultivate, chiefly made up of simple dahlias and hollyhocks, stocks, asters, ranunculus, anemones, polyanthus, wallflower, pinks and carnations, with a fair variety of herbaceous plants; under glass, hard-wooded plants in considerable variety, such as heaths, Epacris and the like, as well as collections of camellias and oranges.

With a desire to secure a position where he could gain more experience, the next step was in November 1832, when the young gardener moved to Glasgow to the nurseries of Messrs Austin & McAslan, in the time of Mr James Austin, there to await a place. As you well know this firm still occupies an honoured place in the front rank of British seedsmen and nurserymen. He tells how, after a rough passage of three days and nights in the little steamer "Highlander," he arrived at the Broomielaw in a dense fog. On his way to Messrs Austin and McAslan's shop in the Trongate, he saw a curious vehicle on wheels which a policeman told him was the cholera cart taking patients away to the hospital, as cholera of a very bad type was rife in Glasgow at that time. After three weeks in the nursery, where the wage at that time was 6s. per week, Mr Robert Thomson, at that time manager, sent him as journeyman to Bothwell Castle, and here he says he really felt he had got his foot on the first step of the horticultural ladder.

Bothwell Castle, at that date, 1832, under the famous cultivator Mr Andrew Turnbull, was a "show place" and regarded as one of the finest gardens in Scotland, famous for its collection of Cape Heaths and other hardwooded greenhouse plants which were wonderfully grown by these old-time gardeners. Here he

says that he owes all the love and inspiration he might have for horticulture to Mr Turnbull, whom he regarded as one of the finest and most upright of men, an excellent teacher and master.

Five years were spent at Bothwell Castle, two as journeyman, and three as foreman. The wage as journeyman was 9s. per week, and as foreman 12s. per week, and he says that when he was first made foreman at 12s. per week he really felt of some importance in the world. Food was very dear to buy, and he mentions that in the summer months work started at 5 A.M. In the five years he managed to buy the *Popular Encyclopedia*, costing £8, *Loudon's Catalogue*, costing 21s., and saved £24. The six men in the bothy took in a weekly paper called the *Reformer's Gazette*, costing 7d. Of gardening literature as such, there was but little at that time, *Loudon's Magazine*, *Harrison's Floracultural Cabinet*, and one or two other publications. About 1840 Lindley started the *Gardener's Chronicle*, and shortly afterwards published his great work, the *Theory and Practice of Horticulture*.

Time, and I expect your patience, forbid that my fourth and last picture should be more than to follow him, in 1837, to Wrotham Park, near Barnet, as head gardener to Geo. Byng, Esq., fifty years M.P. for Middlesex; there he remained sixteen years, and on Mr Byng's death, removed to Dalkeith Palace, then in its glory, where he remained till he began to build the vineries at Clovenfords about 1869, finally coming to reside there in 1871. He has much to say of the many famous nurserymen and gardeners he knew in England and Scotland, but that again is another story.

I have taken the risk of tiring you with these family details in the hope that the little story of a young Scottish gardener setting out on his career in those far-off days, and the pictures of those old times, conditions and ways may not be entirely without interest. I do not seek to present the little sketch as of a career in any way particularly remarkable, for it must have been typical of many a young Scot of that period, and you will know of many in various walks of life.

The thought I had in mind was chiefly to emphasise the wonderful advantages we enjoy in our present state of horticultural progress as compared with over one hundred years ago. The great advance made in the art and practice of horticulture itself throughout the last hundred years, which, perhaps, till

the catastrophe of 1914, I could describe as the "Golden Age of Horticulture" in more ways than one; the aids to our craft by the wonders of chemical and scientific investigation and invention; the great advance in horticultural building and heating appliances; the vast mass of literature now published bearing on the science and practice of gardening, such as our numerous cheap and excellent text books, the many gardening papers, and those veritable works of art, the modern seedsman and nurseryman's catalogue; again the many horticultural societies such as ours, the great shows and exhibitions, the meetings, lectures and other activities; cheap and easy travelling; cheap postage, and many other facilities denied in those early days, and I would venture to think that the knowledge of the wonderful results achieved by our forefathers with such scanty tools and such meagre advantages, should serve as an inspiration to us, whether in our professional, commercial or amateur capacity to carry on the great traditions of horticulture, the foundations of which were so well and truly laid by these grand old gardeners of a century ago.

One sometimes hears it said that the great days of gardening have gone, and, perhaps, this in a sense is true, if we mean by it that many of the palatial establishments of past days have succumbed to the heavy taxation and financial stress of these post war days, though we still cherish the hope that more prosperous times will see a return of the former glories; but if we mean by horticulture, the love of plants, fruits and flowers, and the determination of men and women to have a garden of their own, even if it be no larger than a tablecloth, then I believe the greatest days are yet to come. In place of the comparative few who were actively engaged in our art, we have countless thousands in our villa, bungalow, and cottage gardens, all anxious to be interested and all waiting to be helped in their horticultural activities by such societies as ours.

You all know the difficulties, especially financial, that our Society has to face at the present time, and as your President I venture to ask for your continued and increased support, especially support for our Institution Fund, which we fondly hope at no very distant date may be so increased that an Institution and home of our own may become a reality. I ask for your kind recommendation of our Society to your friends, as our greatest need is an ever-increasing membership, and lastly,

we, as a Society, earnestly appeal for a greater measure of support from the general public at our exhibitions—we cannot carry on our work without it, and we ask for a better attendance at our shows, where for the price of a cinema ticket one can enjoy all the wonders of modern horticulture, produced with such infinite skill and labour.

Such increased support from the garden-loving public would encourage us to greater efforts to add fresh lustre to the name of an old and honoured Society.

8.—BORDERS OF HARDY PERENNIALS.[1]

By D. L. Storrie, Dundee.

I have chosen the title of this lecture "Borders of Hardy Perennials" in contradistinction to the more popular phrase, "Herbaceous Borders," as I intend to-night to deal with hardy perennials whether or not of a herbaceous nature. You may call my borders "herbaceous borders" if you will, and I shall not quarrel with you—indeed for convenience I myself may probably allude to them as such. Such a title is quite permissible in the popular phraseology of the garden—but not I am afraid strictly accurate. In case there are any in my audience who do not quite perceive the difference, may I put it like this. Herbaceous plants are plants with soft-wooded stems, which die back to the roots in winter. Perennial plants *may* have soft-wooded stems which die back to the roots each year, on the other hand they may have *persistent woody stems* which do not die back. I emphasise the distinction because I do not intend to be debarred from using in my borders plants which come under the latter category.

To my mind, a lecture should begin by giving some idea of the history of the subject. I cannot say when it was that The Hardy Flower Border as we know it to-day actually came into being, but there is no doubt that it is of comparatively modern creation. If the credit is due to any one individual more than another, I should say that William Robinson (author of that wonderful classic *The English Flower Garden*) is the man to whom it should be assigned. At all events, it was in the

[1] Paper read at monthly meeting on 6th March 1934.

early 80's of last century that a definite move away from the more formal style of gardening to a more natural began. Previous to this, to use Robinson's own words, "the flower garden planting was made up of a few kinds of flowers which people were proud to put out in thousands and tens of thousands, and with these, patterns more or less elaborate were carried out in every garden. It was not easy to get away from such false and hideous art. One of the best reforms will be to avoid these conventional pattern plans and adopt simple beds and borders in positions suited to the plants they are to grow. These can best be filled *permanently*, because the planter is free to deal with them in a bolder and more artistic way than if he had to consider their relation to a number of small beds."

Here then, we have a glimpse of the urge towards "the natural" in gardening, and I do not think that we present-day gardeners can attach too much importance to this deviation from the paths of formality. It is strange to imagine what our gardens would look like to-day, cut up into a maze of fantastic boxwood-edged beds, if furnished with such glorious plants as *Meconopsis Baileyi*, hardy Primulas, modern Lupins, and the hosts of other beautiful perennials at our command to-day. But if we are to give honour to one who, perhaps more than any other, did so much to alter the conditions, we must not forget to mention one who has done so much to evolve and perfect the herbaceous border as we know it to-day—I refer to the late Miss Gertrude Jekyll. The horticultural trade, too, was quick to see the possibilities of this new phase in gardening. Amongst the pioneers in our trade was the late James Kelway of Langport, and nowadays of course every firm which specialises in the growing of hardy perennial plants must of necessity give heed to the clamour for help and advice in the planning and planting of The Modern Herbaceous Border.

In my capacity as a grower of hardy perennial plants, I have had to plan many borders of all sorts and sizes. I cannot tell you *exactly* how many borders I have planned, but it is no exaggeration to say that I have several hundred borders to my credit—or discredit! I have never yet seen—let alone planned—anything approaching the perfect perennial flower border as I conceive it!

I should say that there are two main essentials in the planning of a good border. First and most important of all is a *thorough*

knowledge of a big variety of hardy plants. That of course is where the hardy plant nurseryman scores. Moving about as he is every day of the growing season among a big collection, the heights and colours and habits not only of species but of each individual variety, becomes—if he is interested—subconsciously registered in his mind, so that when he sits down with the drawing board, he is not worried by a confusion of varieties, as each name automatically calls up its equivalent mental image. Obviously, anyone who sets himself to plan a hardy flower border without adequate intimate knowledge of the plants, is at a very great disadvantage indeed, and although most good catalogues give some description of the plants, with height, colour, and time of flowering, this information in itself is of little or no advantage from the point of view of *effective* planning. I say, therefore, that the first essential is this intimate personal knowledge of the subjects which you are to use as your raw material.

The second essential for the planning of a good border is undoubtedly some idea of artistic arrangement. So many borders are spoiled through lack of this. It is not everyone who can lay claim—fortunately or unfortunately—to the possession of an artistic temperament! I know many people interested in gardening—mostly ladies—who are undoubtedly artistic, and who achieve some really wonderful effects in the garden with but a very slight knowledge of plants. Could we get some of these people to make a life study of hardy plants then we might be privileged to see the ideal border!

Most of us, however, who are daily engaged in garden work, have or ought to have some idea of artistic arrangement. At all events we can, if we keep our eyes open, learn how to avoid the more common pitfalls in the work of arrangement, whether it be the arrangement of a border only, or of an entire garden.

Do not, therefore, let us be discouraged merely because we do not consider ourselves artists. There will be many failures, but as the creative faculty becomes keener so will the standard of art rise higher. Above all, we must study *harmony*. Harmony is the essence of all true beauty. I do not exclude contrasts—they are essential in order to throw harmony into relief—but do not let your contrasts be too harsh. Harmony and "harmonious contrasts" are, perhaps, the chief features in the arrangement of the groups in the border.

I say, therefore, that knowledge of your subjects coupled with some artistic ability are the chief essentials to a well-designed herbaceous border.

Before going on to the actual planning of the border, let us assume for a moment that we are dealing with a new garden just being laid out; for here we have it more or less in our power to make the border where we will and of whatever size and form we desire. The question of site will be determined by the available space and the relative position of the house or lawn. I once heard a gardener say that he could make nothing of his herbaceous border as "it was too wide." It was 12 feet wide! To my mind 12 feet is an ideal width—but really a herbaceous border can scarcely be too wide. I recently planted one 28 feet wide at one end, narrowing to 12 feet at the other. Naturally I used shrubs for a background—and what could be more effective? A width of 12 feet is not essential, 10 feet or even 8 feet in width will do, but it is not easy to get a really good effect with any border which is narrower than 8 feet. I think an ideal position for a herbaceous border is flanking a lawn and with a background of flowering shrubs. In such a position, it is generally possible to have a curved outline, which is infinitely more interesting, and, to my mind, much more artistic than a straight edge. On the other hand, if you are flanking your border with a path, a straight edge is not only desirable but almost necessary. The rather old-fashioned idea of planting herbaceous borders on both sides of the central path through the kitchen garden, I do not commend. Not that it need not be a pleasing picture, but I prefer to have the herbaceous border in the flower garden or pleasure grounds proper, and not relegated to the fruit and vegetable quarters! Nevertheless, if the garden in question is small, a most effective scheme can be accomplished by utilising two sides of the vegetable plots as borders, with either a grass or paved path between. The borders in this case should be at least 8 feet wide and cut off from the main garden by a trellis 7 to 9 feet high.

With regard to aspect, the border may be facing south, west, or east, but it should not face north. It may have for a background either a wall, trellis, or flowering shrubs—not trees which will impoverish the soil—nor should fruit trees be used as a background, not that they will harm the border, but the plants will undoubtedly harm them by excluding light and air during

the growing season. For width we want, if possible, a minimum of 8 feet. I do not propose to deal with the preparation of the border—such work is familiar to all practical gardeners—but I do want to emphasise the need for *deep cultivation*. I think it is worth while too, to mention that very few hardy perennials are averse to lime, and a much greater general use of lime on the herbaceous border would be highly beneficial.

There now comes the question of what type or kind of border it is intended to have. For convenience I divide perennial borders into four types or classes. These are:—

I.—The General Mixed Border (probably the most popular).
II.—The Colour Border (where sections are planted to a definite colour scheme).
III.—Mixed Border for Special Seasons (such as July-August border, August-September border, and so on).
And lastly,—Borders of one or two kinds of plants only, which will be in bloom at precisely the same period.

The mixed herbaceous border is the one we see everywhere—some good, some bad, and many perfectly hideous. I remember a garden in Perthshire where I once saw a so-called mixed border consisting of practically nothing but yellow and terra-cotta. This was in August when Heleniums, Rudbeckias, Helianthuses and similar other flowers were in their prime. Apparently the other colours were only to be found among the plants which had bloomed earlier in the season—a perfect illustration of bad planning.

With regard to the Colour Border. This is indeed the "bug-bear" of anyone whose job it is to plan perennial borders. Invariably it is the ladies who ask for such a border. I have had to plan several such borders, and I have always submitted these feeling that, should they be approved, I should like to be in some other country when the plants come into bloom! Seriously, however, a colour border is most troublesome. Many years ago, after spending weary hours over my first colour plan, I made a point of procuring what books I could on the subject. The only one at all helpful was Miss Jekyll's *Colour Schemes for the Flower-Garden*, and imagine my surprise on reading the very first paragraph in her introduction. I will quote it to you. "To plant and maintain a flower border with a good scheme for colour is by no means the easy thing that is commonly supposed.

I believe that the only way in which it can be made successful is to devote certain borders to certain times of the year, each border or garden region to be bright for from 1 to 3 months." Further, on reading the subsequent chapters, it is soon obvious that not only does the author find it necessary to limit her colour borders to certain seasons, but her colour schemes are not by any means attained by the use of hardy perennial plants alone. She finds it necessary to introduce quite a lot of annuals and tender perennials, such as *Salvia* and *Lobelia fulgens*. So that my own difficulty in planning colour groups of hardy perennials was not entirely due to ignorance. The fact is, that it is impossible to get really effective colour groups on any large scale, for the simple reason that we cannot avoid "patchiness" owing to the plants of one particular colour not being all in bloom at the same time. I therefore advise caution in all cases where one is tempted to plant a hardy perennial flower border in colour sections.

Mixed Borders for particular seasons are the easiest of all to plan, as in this case practically all the plants chosen will come into bloom more or less simultaneously. Consequently, there is little difficulty with regard to blanks, which in the general mixed border are often difficult to avoid. Even here, however, if the border is at all large, difficulty will still be found if you decide to colour group—in an August border for instance you may find it very difficult to get a sufficiency of blues.

There are many gardens in Scotland, the owners of which are only in residence during a particular season—in many cases during August and early September. In this case, a good gardener will endeavour to have his borders at their best during this time—generally a fairly easy matter, as so many of our perennials are then at their best.

I shall only briefly refer to my last class—borders of few kinds of plants only. Some people like to have large collections of their favourite plants, and in such cases good displays can be had by planting together such subjects as Irises and Lupins for June; Delphiniums and Paeonies for July; Phloxes and Astilbes for August, and so on. In this case, little design is required. I have seen a Lupin and Iris border a perfect picture in June. Not less than 6 Lupins of one kind were used and 24 Irises clumped in front and between the Lupins. In a narrow border, of course, fewer plants would be required. Similarly, a border

consisting of nothing but Phloxes, Japanese Anemones and Astilbes presented a truly wonderful sight in August of last year. In this border are no less than 1600 Phloxes, consisting of some fourteen varieties, planted in large groups of from 80 to 120 plants in each, graded as to colour and height, and divided in most cases by drifts of Japanese Anemones in all shades of pink and crimson. I do not think I have ever seen a finer perennial border. I shall show you several slides of it later.

I have said that I consider the Mixed Border, as distinct from the Colour Border, to be the more satisfactory. My ideal perennial border would be really a mixture of hardy herbaceous plants and shrubs, planned to be at its best from June to August. For such a border I would have a width of at least 15 feet—preferably 20 feet. Towards the back would be planted specimen flowering shrubs, particularly for foliage effect, singly and in groups, such as Standard *Prunus Pissardii nigra*, *Cornus Spathii aurea*, and *Cornus elegantissima*; *Forsythia*, *Eunonymus europaeus*, Flowering Cherries and the best of the Crabs—not forgetting that wonderful coloured variety *Pyrus malus Eleyi*. Below and between these, a few shrubs in bush form, such as *Spiraea ariaefolia* and *Spiraea opulifolia aurea*, *Berberis dictyophilla* and other subjects of similar character, but not of too rank growth. The wider the border the more scope for shrub planting, but we must not plant in lines or in any way approaching a formal setting. The quantity of shrubs, too, will depend on the width of the border—with a width of 12 feet we cannot, of course, have many shrubs, but nevertheless we should not leave them out entirely. Clumped in and out among the shrubs in drifts of irregular outlines would be the taller herbaceous plants—graceful *Artemesia lactiflora*, below what shade there may be from overhanging branches, flaming Red-Hot Pokers, drifts of *Bocconia cordata* wedging itself between the flaunting scarlet Lychnis, and the magenta-coloured *Geranium armenum*. Here and there groups of stately tall purple and blue Delphiniums, deftly placed behind some later flowering subjects such as Astilbes, to cover up their withered brown stems when the glory of their bloom is over. Towards the centre, clumps of Lupins, Heleniums, Phloxes, Pyrethrums, Paeonies, and Rudbeckias; later Astilbes, Japanese Anemones, etc., etc. Towards the front many dwarf-growing subjects would be used, such as Geums, Heucheras, Hybrid Potentillas, *Helenium pumilum*, Erigerons and hosts of

others; but to my mind the front should on no account accomodate *only* plants of low habit. I think nothing looks worse than a carefully graded border, beginning with plants 3 to 6 inches in height and rising in a straight bank towards the back. Break the levels here and there along the front by introducing subjects which grow up to even 2½ feet in height. Nothing looks better than clumps of June flowering Irises, Red-Hot Pokers and some of the dwarfer Phloxes in large clumps here and there right at the extreme margin. Japanese Maples, too, are ideal subjects to use towards the front of the border, and if it is a fairly large one, 2 or perhaps 3 clumps of these may be utilised. The cut-leaved variety *Acer palmatum dissectum atropurpureum* is especially fine. They may be planted about 3 to 4 feet apart, and the effect in a well-planned border is really wonderful.

A June to August border such as this can be extremely effective, and very few blank spaces will be in evidence. This of course means that many quite effective plants, such as Michaelmas Daisies, must be rigidly excluded. On the other hand, however, one may equally well have an August to October border. In this, such plants as Lupins, Pyrethrums, and the earlier flowering Delphiniums have to be omitted, and their places taken by Michaelmas Daisies, *Eupatorium purpureum*, Golden Rod, and so on. While on this question of flowering dates, may I remind you that many varieties of the same species differ widely in their dates of flowering. Take Lupins, for instance. I have myself a collection of just over 50 varieties. The earliest on the list, Mayflower, is generally fully open by the middle of May, while the latest, Ada, is often at its best during the first few days of July. Similarly with Delphiniums. The variety Queen Mauve is never out with me until the beginning of August. Consequently it is quite possible, by making a judicious selection, to have Lupins and Delphiniums in bloom in the border at the same time. I would ask you to compare in your minds a border such as this with one which is planned to give a continuity of bloom from early summer to late autumn, beginning with say Trollius in April and finishing with Michaelmas Daisies in October. To my mind the latter could never be other than a succession of patches.

These, then, are some of the plants which may be used in the border. I have indicated only a very few, as this lecture must

not be in the nature of a catalogue. Meantime, I would just like to say a word with regard to the actual planning and planting of the border. It must of course be marked out on paper first, and it is here that one feels the benefit of a sound knowledge of hardy plants. Heights, colours, and times of flowering are the main things to bear in mind when working out your scheme—and of course the distances at which to plant. Naturally the plants towards the back must be higher than those in front of them—at least as a general rule. The question of colour is bound up to a large extent with the flowering season. It does not matter if you have a clump of flaming orange against a brilliant magenta, if one is to be out of flower before the other begins—but it will matter very much if they bloom together!

It is, of course, often difficult to place your colours correctly, but light blue, lilac, lavender and light pinks are ideal shades to split the groups of the stronger colours. Red is generally difficult, and white should be used with great restraint. In the case of a border intended to cover a fairly long season, the question of "covering up" is perhaps the most important of all. By this, I mean planting in a definite arrangement, whereby early-flowering plants will come in front of later-flowering ones and vice versa. Nothing looks worse than blanks. As a matter of fact, the avoidance of blanks in the border is perhaps the least difficult part of the planning—yet how often one sees an otherwise excellent border spoiled through insufficient attention having been paid to the flowering dates. Of course, in a season such as we had last summer, things are apt to go wrong. Normally, however, Lupins may be covered by Phloxes, Delphiniums by Astilbes, Michaelmas Daisies by Delphiniums, and so on. Some attention, too, should be paid to the habits of the various plants. Plants with ornamental or semi-ornamental foliage, such as Yuccas, Kniphofias, Hemerocalis, Irises, and Funkias, never look "blanky." Indeed, it is often useful to include them mainly on account of their foliage. Again, plants which carry their flowers in spikes should not be grouped all together. These are seen at their best when rising up through those whose flowers are borne in umbels and panicles.

When it comes to the question of planting distance, here again a knowledge of the actual plants is very necessary. Such plants as Cimicifugas and Kniphofias *must* be put much closer together than Lupins and Michaelmas Daisies, if a well-balanced effect is

to be obtained. Generally speaking, however, I always plant the plants in the back groups at about 2½ feet apart; those in the middle groups about 2 feet apart; those in the front groups about 18 inches apart. There are, of course, a great many exceptions, and experience alone can determine the best distances. When an immediate effect is required it is necessary to plant somewhat closer.

Now as to the actual planting of the border, we are assuming, of course, that it has previously been *thoroughly* cultivated, *i.e.*, deeply dug and well manured, as most herbaceous plants are gross feeders and your border should not subsequently require cultivation for a period of at least three years. I have found it a good plan to lay at least 2 long lines along the border, with several cross lines at 10 feet apart. These lines act merely as a guide, as without them one is apt to allow either too much or too little space for each group. Next, with a shaft of a hoe or similar tool, roughly mark out the outline of each group. Put down the plants as near as possible in their positions as indicated on the plan. You will have as a minimum at least three plants to each group—better if you have five—and in the case of a large border many more plants may be used per group.

You will note that so far I have said nothing of the question of cost. It sometimes happens that when cost is a primary consideration one wants to plant wider, and fill in the gaps during the first year with annuals or even dahlias. Up to a point this is satisfactory, but it cannot be recommended. If you do this you can hardly expect to achieve a good colour effect—and of course it ceases to be a border of hardy perennials—so that it is really outside my province here. Still, it is better to do this if absolutely necessary, rather than to economise by using cheap and out-of-date varieties. If you are going to plant a Herbaceous Border at all, use the best varieties of each individual species. Why plant the old Phlox Europe when Graaf Zeppelin is so much better? Why use Helenium Crimson Beauty when Moerheim Beauty is so vastly superior? Why *Rudbeckia purpurea* when its new variety The King is such an enormous advance on the type? No, plan well, plant well, and use the best varieties.

"But," some of you may say, "this is all very well for the owner of a large garden with plenty of room at his disposal—what about the smaller garden—say the average villa garden."

Here too, of course, a perennial border can be a thing of beauty, but naturally the effect of clumping in large masses cannot be had to the same extent. One often sees a narrow border with a width of about 3 feet or so flanking the path of the suburban garden. Very often a miscellaneous assortment of hardy perennials, ranging from Auriculas to Delphiniums, is to be found in the border. Such a border can never be other than patchy. I think it is much better to plant this with masses of annuals or biennials or perhaps Antirrhinums or Dahlias. Planted in this manner a wealth of bloom can be had covering practically the whole of the summer and early autumn months. Of course you can, if you wish, use perennials in a border 3 or 4 feet wide, but in this case I think it is best to use single plants only, choosing those of similar height and all of fairly dwarf habit, rather than to attempt to group in clumps.

In the case of a border 5 feet wide one can group more or less satisfactorily—especially if the border is facing one way only. Here again, however, one must not use too tall-growing plants.

I have mentioned these small borders because I would not have you think that perennial borders are *only* suitable for the larger gardens. With proper treatment they can be made a real feature, and whether grouped or not, no garden however small can afford to be without a selection of herbaceous perennials.

And now before I conclude, I just want to give one or two words of advice regarding the maintenance of the border. The most important question is, of course, that of staking. An otherwise almost perfect border can be absolutely ruined by inefficient staking. You simply *must* stake the taller plants, and especially Delphiniums, Lupins, Campanulas, and Michaelmas Daisies. You may, if you like, risk those with lighter heads, such as some Astilbes, and those with a strong sturdy habit, such as Helenium Wyndley, many of the Phloxes, and Aster Little Boy Blue. But it is not advisable to risk anything. Even if wind does not trouble you, rain probably will. The stakes, of course, should be hidden as far as possible amongst the foliage. That often means staking twice—a lot of work but it is worth it. We don't want to look at lines of bare stakes for half the season! Canes are useful for spikey flowers such as Delphiniums—one cane, of course, per spike. The best method for most plants is to use well-branched sticks from a wood, such as dead branches of spruce. This reduces tying to a minimum, the plants them-

selves in many cases growing through and between the branches. Whatever you do, avoid pulling up all the heads and stems to one centre stake and getting a "bunched" effect, which looks perfectly hideous. Try to stake unobtrusively, but at the same time try to keep the plant growing naturally—not with all its stems huddled together. With regard to the cultivation of the soil after planting, as far as possible keep the Dutch hoe going all the time. During the first spring after planting, when the plants are just beginning to grow, it is as well to lightly—very lightly—fork over the border, taking care not to go too near to the plants and not to damage the roots. A dressing of manure, either farmyard or artificial, may then be given. Never mulch with farmyard before, or during, winter. It only serves to keep the ground wet and cold when you ought to be letting it get all the sun it can. Slugs may be troublesome in early spring—especially on Delphiniums and Pyrethrums—so watch for them and deal with them in time. A very important point during the growing season is to keep all old flowers cut off and not allow them to seed. If you do this you will be rewarded with 50 per cent. more flowers during the year. Cut out the old spikes of Lupins just as they are going over, and the laterals will strengthen up and give a wonderful display. The same applies to Heleniums and Phloxes. Cut back Delphiniums to about one foot before the spike is actually over and, if the season is good to you, you will be rewarded with a good crop of spikes in September again. Only by constant observation and timely attention will your border give you of its best, and if you study it, care for it and nourish it, when in the fullness of time it demands thinning out, you will boldly lift the whole border, replan, and plant one 100 per cent. better than its predecessor.

9.—NOMOCHARIS.[1]

By Andrew Harley, Kirkcaldy.

I have been asked by the Council of the Royal Caledonian Horticultural Society to give a short account on the cultivation of *Nomocharis*.

As most of you know, these liliaceous plants occupy a position in the family between *Lilium* and *Fritillaria*, and are easily raised from seed. In their native habitat they are found growing at an altitude of 11,000 to 13,000 feet, and are therefore perfectly hardy in this country.

I have been experimenting in growing *Nomocharis* from seed saved from my plants during the last five or six years, and now find the best method is to sow the seed in the month of February in a heated house. The seed is sown in boxes about 4 inches deep, the size of box depending on the quantity of seed you have to sow. The boxes are well drained and filled with loam, leaf mould and sand, and the seeds are sown thinly, a space of about half an inch between each seed, and then covered with about one-eighth inch of soil.

I have sown the seed in September, immediately it was collected from the plants, and most of the seed germinated in two to three weeks, but could not find I had gained anything over the seed sown in February, and had the trouble of looking after the boxes of seedlings all winter.

Great care should be taken that the soil is free from wire worms, as one of these will clean up a box of seedlings in a very short time.

The best place to raise and grow on the seedlings is in a greenhouse or vinery, in which heat is on from the beginning of February till the end of October. Seed, if sown in February, will germinate in two to three weeks. I now find it better to leave the seedlings in their boxes for one year. By doing so, the seedling bulbs are much larger at the end of one year than those which have been raised in a seed pan and pricked out into boxes a few months after germination. The roots of *Nomocharis* seedlings are very tender and easily broken when pricking them out.

You will find the first leaf or cotyledon made after germination will die down in two to three months, but immediately afterwards a new growth will come up and the bulb will go on growing till the winter sets in, and stops growth during the month of November.

[1] Paper read at monthly meeting on 3rd April 1934.

The boxes with the seedlings are left in the vinery where the heat has been cut off in November till the beginning of February the following year, and are frozen up during severe weather. This I think is necessary so that the young bulbs get a three months' rest. I know of cases where the seedlings have been grown in heat all year without a rest. These seedling bulbs were much later in starting their growth in spring, and were much weaker than those that were rested for three months. As I have already mentioned, *Nomocharis* bulbs are perfectly hardy. Boxes of seedlings have been frozen for a month at a time without any evil effects. After the seedlings have died down in November, they are kept in the cold greenhouse or frames, and get very little water for three months while they are resting.

Early in February the soil in the seed boxes is knocked out and the small bulbs are carefully picked out. The seed boxes are again filled with fresh soil with good drainage. The drainage is covered with turfy loam, then filled up with loam, leaf soil and sand, and the bulbs planted in this.

With reference to the time it takes to flower *Nomocharis* from seed, I may say that seed sown in February 1930 and the seedlings grown on as described, a few of the bulbs flowered in April 1932—26 months after the sowing of the seed. These varieties were:—*Nomocharis pardanthina*, *N. pardanthina var. Farreri*, *N. Mairie*, and *N. Saluenensis*.

The young bulbs that flowered had one, and in some cases two flowers to each bulb.

The seedlings raised in February 1930 were grown on in boxes till October 1932, when they were planted out in their permanent position, and the greatest number of them flowered last summer.

When one considers the number of times seed of *Nomocharis* has been sent to this country by the late George Forrest and Kingdon Ward, it is surprising that so few gardens are as yet growing these lovely plants. I believe that this is due to the fact that in many cases where seedlings had been raised, the small bulbs had been planted out too soon, and been lost or eaten by slugs when they started into growth during the spring after planting.

I find slugs are very fond of the leaves of *Nomocharis* just when they appear through the ground, and they do a lot of damage if not checked. Therefore the beds get a good sprinkling of Paris green and bran—one part of Paris green to 20 parts of

bran. The first dose is put on immediately growth starts and a second dose two weeks later.

The Paris green and bran is well mixed together and kept dry till it is required. When the beds are to be treated, a sufficient quantity of the mixture is damped with a small quantity of water to make the Paris green adhere to the bran, and scattered on the beds.

In my garden the bulbs are planted in their natural soil, which contains a certain amount of peat, and being rather stony, there is good drainage. I should think any garden that can grow rhododendrons should be able to grow *Nomocharis*. I may say, I have no experience of how they will grow in soil that contains lime. I have them planted in half shade, and also full sun. Those growing in full sun are planted among dwarf rhododendrons. Of course in Perthshire we never get the soil dried up to the same extent as in gardens in the south.

All the *Nomocharis* species growing in my garden come into flower about the middle of June, and last for four to five weeks. *N. pardanthina var. Farreri* is the last species to open its flowers. They set seed very freely, but I never allow more than two or three capsules to ripen on a plant, as I find if allowed to ripen a large quantity of seed, this tends to weaken the bulbs, and they do not flower so freely the following year.

The seed capsules are very large for the size of the plant, and each capsule contains a large number of seed which is ripe about the end of September.

I find *N. pardanthina* has the largest capsules of the species I have flowered. On strong growing plants, the capsules measure about $1\frac{1}{2}$ inches long by 1 inch diameter.

The beds where they are growing get a top dressing of old leaf soil during the winter. The bulbs are perfectly hardy and do not require any protection during the winter.

I find the flowers of *Nomocharis* vary very much. Some seedlings of *N. Mairei*, which flowered last year, had pure white flowers without any spots. This is the form "Candida" mentioned by Mr Evans in the notes from the Royal Botanic Garden, Edinburgh. Some seedlings of *N. Saluenensis* had white flowers also.

The species I have grown and flowered during the last few years are:—*Nomocharis pardanthina*, *N. pardanthina var. Farreri*, *N. Mairei*, *N. Aperta*, *N. Saluenensis*, *N. nana*.

I have seedlings of a few other varieties, but these have not flowered yet.

10.—BEES AND FLOWERS: THEIR INTER-RELATIONSHIPS.[1]

By J. Cunningham, Edinburgh and East of Scotland College of Agriculture.

That bees are beneficial creatures in the life of plants is a biological truth, though only now beginning to be generally appreciated. The behaviour of bees in relation to the flowers they visit was at one time misinterpreted as harmful. It was an old-fashioned belief that bees were plunderers of flowers and removed vital substances but gave nothing in return. And this belief is by no means quite dead in some quarters. The same ignorance existed regarding the metamorphosis of insects. Darwin, for instance, in his book, *Researches into the Geology and Natural History of the Countries visited by* H.M.S. Beagle, relates that the civil and ecclesiastical authorities of St Fernando in Chili arrested a man on a charge of witchcraft, because he kept some caterpillars which turned into butterflies.

It is a reciprocal arrangement that exists between plants and bees. The bees themselves are entirely dependent upon the flowers for their means of subsistence. Two kinds of food are collected, a liquid food, nectar, which later becomes honey in the hive, and a solid food, pollen, which is really the fertilizing dust of the flower. Nectar is not in itself needed by the plant, therefore its removal causes no inconvenience, and in any case, it is soon replaced by a fresh supply. But the presence of this nectar is an incentive to the bee to visit the flower, and the result of such a visit of a pollen-carrying insect is the cross-fertilization of the plant. The removal of large quantities of pollen by insects likewise causes no hardship to the plant, for the amount produced is far in excess of that required for fertilization purposes. Nature is usually very extravagant in her preparations for reproduction. Plants like most forms of life depend on fertilization in order to reproduce their kind, and it has been stated by botanists that the flower itself is merely an arrangement by which the reproduction of the plant is brought about. The reproductive organs of the plant, stamens and pistil, therefore, are situated in the flower. Nature in general abhors self-fertilization, and the majority of plants are

[1] Lecture delivered at monthly meeting on 5th June 1934.

no exception to this. It is interesting therefore to observe the ingenious arrangements of stamens and pistil in the different flowers to hinder self-pollination and to encourage cross-pollination. In the case of the ordinary flowering plants this cross-pollination is effected by insects, with bees among these as the most important pollen-carriers. The bees are well adapted for this work, with pollen-collecting hairs on the body and a wonderful arrangement of combs on the legs for scraping the pollen from the hairs and packing the mass into what are known as pollen baskets on the third pair of legs. In this position the pollen is finally carried home to the hive. The greater importance of bees as pollinating agents is due to their greater numbers, and also because when foraging they are more constant in their attentions to one species of plant.

Bees, particularly the hive or honey bees, are invaluable in the orchard. In fact, in the words of an American authority, "honey bees and modern fruit culture are inseparable." Honey bees are best for orchard work because they are the only pollinating insects under the control of man, and also because the colonies they form are much more populous than those of any other species of social bees. A medium-sized bee-hive for pollination purposes may contain 20,000 bees, whereas a nest of one of the wild species of social bees may contain 200 to 300 bees at the most. Many of the larger orchardists of the United States are now making use of honey bees to ensure a better distribution of pollen in the orchard, and as a result larger and better crops of fruit can be produced.

While white clover is pollinated by both honey bees and humble bees, the red clover has a longer or deeper corolla tube, the nectar at the bottom of which is beyond the reach of the tongue of the honey bee. The red clover, therefore, depends entirely for cross-pollination on the humble bee, whose tongue is longer than that of the honey bee. Darwin's red clover experiment is interesting. He covered a hundred heads of clover with muslin so that air and sunlight got in but no bees. From these hundred heads he got not a single real seed, while from another hundred heads without muslin and open to the visits of humble bees he obtained 27,000 seeds. Red clover as a crop in New Zealand was a failure at first, until it was realized that there were no native species of humble bees in that country to cross-pollinate the flowers. The authorities,

however, got over the difficulty by importing humble bees from this country and from America. There are many other flowers with deep corolla tubes like the garden Columbine and Snapdragon where the nectar can only be reached by the longer-tongued humble bees, and consequently such flowers are sometimes described as humble bee flowers. Occasionally with flowers of this type some of the shorter-tongued wild bees puncture the corolla tube at the bottom and are able in this way to reach the nectar. Such behaviour, of course, is unorthodox, and the flower receives no benefit from insect visits of this kind.

If bees are of assistance to plants in reproduction, so are the plants, with their flowers, of similar service to the bees. Without nectar and pollen the bees could not exist. Pollen is used for the feeding of the young or brood, and nectar, after being transformed into honey, forms the stores or reserves of liquid food. In the case of honey bees, the amount of nectar collected and stored begins to increase during the early summer with the appearance of more flowers. This increase in the food supply, and consequently in the hive population, creates the desire to swarm, which really means, in honey bees, the propagation of the species. The swarms which leave the hives establish themselves as new colonies, and in this way honey bees are multiplied. Where the pasturage is rich for bees there will be found the greatest number of colonies, and also, the hives will contain more honey than in districts less favourable. It is in such favourable localities that bee-keeping becomes a profitable pursuit by the production of honey. The amount of honey produced under favourable conditions by a single hive of bees is sometimes amazing. A harvest of 100 lbs. is quite common, 200 lbs. not uncommon, and close on 300 lbs. has been taken occasionally in Scotland. It is very obvious, therefore, when producing honey how flowers benefit bees, but on the other hand, not quite so obvious the services rendered by bees to the plant world. Yet it has been stated by an American professor, that bee-keeping adds indirectly more to the resources of that country annually by flower pollination, than by the sale of honey and wax. This is tantamount to saying that the bee-keeper is a public benefactor!

11.—STRAWBERRY CONFERENCE

held at Sweethope, Inveresk, on 10th July 1934.

On the invitation of Mr James W. Scarlett the members of this Society were invited to join the Strawberry Conference at Sweethope.

Mr R. L. Scarlett in his speech said that the object of the Conference was to find a variety of strawberry suitable to the conditions in Scotland and capable of meeting modern demands. He also intimated that through the kindness of our Honorary President Lady Elphinstone we had been allowed to present to Their Majesties the King and Queen a basket of strawberries, also to send a basket to Their Royal Highnesses the Duke and Duchess of York. Mrs Thomson, wife of the President, presented a basket of strawberries to Lady Elphinstone.

The Secretary intimated that the special prize presented by Mr Robert L. Scarlett had been won by Mr James McDade, The Glebe, Kilbirnie, with a variety named "B 17." The first prize for the best punnet of a standard variety was won by Mr Mark Slight, North Mains, Ormiston, with "Rosemount."

12.—THE HISTORY OF THE ROYAL CALEDONIAN HORTICULTURAL SOCIETY.[1]

By Donald Mackenzie, S.S.C., Edinburgh.

It was on 5th December 1809, in response to a circular letter by Dr Andrew Duncan, senr., Mr Patrick Neill and others that seventeen gentlemen assembled in the Physicians Hall and unanimously resolved "to constitute themselves into a Society for encouraging and improving the cultivation of the best fruit, of the most choice flowers and most useful culinary vegetables." At that meeting office-bearers and councillors were chosen, and the newly appointed treasurer was empowered to receive donations and annual payments. At the first meeting apparently the title of the Society had not come under consideration, but it was not long before the Council got to work, and on 19th December 1809 they met to prepare a sketch of the bye-laws and the prize questions. On this date, also, the first exhibit came before the Council, and the honour belonged to Mr Macdonald, Dalkeith House, who exhibited a quantity of blanched seakale shoots together with a notice "respecting the quickness of the progress of this vegetable under proper management." In the minute of the meeting the name of the Society appears for the first time as the Caledonian Horticultural Society. At a general meeting called for 6th March 1810, the Society made its first award in the form of a Silver Medal to Alexander Gibson Hunter, Loretto, for the best six heads of spring broccoli. The social amenities were not altogether neglected, for it was unanimously agreed that the Society should dine together after the quarterly meeting on the first Tuesday of September. Appropriately enough that meeting was held in Macewan's Tavern, which was then in West Register Street, and which was afterwards removed to Waterloo Place where it became known as Oman's Waterloo Tavern.

Wine appears to have been a popular subject for competition at that time as it is recorded that "the Committee for determining Currant wine met at 12." There were three judges, and 19 bottles of wine were sent in and submitted to "a very careful and impartial examination and comparison." One does not know

[1] Paper read at monthly meeting on 2nd October 1934. Abridged and revised for publication.

whether to envy those judges or the reverse in view of the dinner which was to follow. Five prizes were awarded and the specifications of four of the prize wines were given. Of the fifth it is noted that she declined furnishing any receipt. In all four specifications the finishing touches to the fermentation are supplied by pure ardent spirit, good whisky suffering from no peculiar flavour or, as one lady put it, "brandy is much better if you have it." In the year 1811 the judges had to face 24 different kinds of wine; in 1812, 34 specimens were produced, and in the Society's minutes of August 1814, it is recorded that as there was a very abundant crop of white currants for which there was not an adequate demand, the Society, for the encouragement of gardeners, offered a Gold Medal or five guineas to any inhabitant of Edinburgh who should make for sale the greatest quantity of currant wine. The medal went to Mr George Montgomery, Princes Street, who had paid duty on 866½ gallons of 1814 vintage. The report of the Committee is wonderfully clear considering the circumstances, and it ends with a remark on the improvement of this branch of domestic manufacture. Wine competitions were continued for a number of years, and in 1821, Sir George Mackenzie produced a sample made from the thinnings of grapes when half ripe. Interest seems later to have died out, or perhaps the excise laws may have had something to do with the disappearance of this excellent class from the prize questions.

At the outset the Society dined after each September meeting at Oman's Waterloo Tavern. It is observed that in September 1815, at the annual dinner a haunch and neck of venison presented by Sir John Sinclair formed part of the fare, and after dinner the most sumptuous dessert ever seen in Edinburgh was placed on the table, consisting not only of fruits which had been submitted for competition but of fruits sent as presents to the Society. The number of dishes considerably exceeded 40, and included all the finer kinds cultivated in Scotland.

It is of interest to note that as early as 1811 a Committee was appointed to look out for a proper place for a garden in the neighbourhood of Edinburgh in which experiments might be conducted under the direction and at the expense of the Society. This Committee was also empowered to make application to the Government for aid. The result of this Committee's labours is not recorded, but in 1812 another Committee was appointed to correspond with the Marquis of Douglas with a view to procuring

the lease of a piece of ground for a garden near the Palace of Holyrood. This Committee never reported, or, if it did, no record of its report was kept.

After dinner in September 1815, Sir John Sinclair in a very energetic address recommended the Society to send a deputation of their members on a horticultural survey to the Continent of Europe, particularly Holland and the Netherlands. This was, as might be expected after such a dinner, eloquently seconded by Francis Jeffrey, afterwards Lord Jeffrey, and the President announced that he would bring the proposal before the Society. This was done, and Dr Patrick Neill and Mr James Dickson, the two secretaries, were entrusted with the mission. Unfortunately, Mr Dickson died in May 1817, and it fell to Dr Neill, Mr John Hay and Mr James McDonald, chief gardener at Dalkeith Park, to carry it out. The mission sailed from Leith on the afternoon of 1st August 1817, in "The Czar," "one of those elegant and commodious vessels which ply between that port and London." They made a prosperous voyage, having entered the Thames in little more than four days. An account of the work of this deputation was published by the Society under the title of *Journal of Horticultural Tour through Some Parts of Flanders, Holland, and the North of France.* A copy of this journal is in the Society's library and is well worth reading. Dr Neill, in a preface, sums up the views of the deputation as follows: "The truth is, we were led to form the opinion that our own style of gardening in Scotland is, generally speaking, superior to that we witnessed on the Continent. It may be very true that we originally derived our horticulture from the Flemings and the Hollanders, but it seems equally certain that we have now in many respects surpassed them."

In its earlier years the Society offered awards for various matters connected with horticulture. At the quarterly meetings papers on various subjects were read and a medal awarded to the best paper contributed during the year. A premium was offered to the gardener who should carry the largest quantity of seakale to the Edinburgh market, also for the largest quantity of onion seed saved in Scotland. An award was made in 1814 for a woollen net manufactured in Haddington which was said to be excellent for preserving blossoms from spring frost.

In 1816 the Society procured a Seal of Cause from the Lord Provost and Magistrates of Edinburgh constituting it a body

corporate with all the powers and privileges commonly conferred. It is stated in the minutes that the Principal City Clerks and Keepers of Records had very handsomely made a present to the Society of the usual fees.

Towards the end of 1816 the Council were again seriously considering the matter of establishing an experiment garden, and offered a Gold Medal for the best design. This medal was won by Mr John Hay of Edinburgh. The objects the Society had in view were "the improvement of kitchen vegetables, furnishing to the country at large scions of the best kinds of fruit trees, and introducing into Britain such useful forest trees as are not yet familiar." The subject was not again raised until the end of 1818 when another Committee was appointed to approach the Exchequer with a view to establishing an experimental garden in connection with the intended Royal Botanic Garden, but apparently there were difficulties in the way, and on that account a subscription garden was recommended. Nothing seems to have come of this, but in 1820 a proposal was made that the land recently purchased by the Government near Holyrood be granted for the garden. This proposal came to nothing, and the next we read of the scheme is when the Committee reported that a piece of ground belonging to George Heriot's Hospital was suitable and could be had on reasonable terms. The professor of botany and others, however, expressed a strong desire that the Society should obtain the field immediately to the south of the new Botanic Garden. At this point there is a hiatus in the records since when it again appears in the minutes of 8th June 1821, it was reported that the Society had obtained the promise of a loan of £4000 at $3\frac{1}{2}$ per cent. from the Government which was to be guaranteed by certain influential members. The field adjoining the Botanic Garden on the south was obtained. In 1822 the Society was approached by the Barons of Exchequer and the professor of botany to agree to a stipulation that the ground should not be used for building. This was agreed to on condition that the stipulation was made reciprocal. An alteration of plan, however, was made, and the Society made a suggestion that the Crown should buy the ground and lease it to the Society. This suggestion was adopted, and a lease was signed early in 1824. The Society then raised money from the members, and it is interesting to observe that the sum of over £700 was subscribed in India.

The Botanic Garden had formerly been situated in Leith Walk, but was gradually being removed to its present site. Cockburn in his Memorials chronicles the removal in this way: "It was in 1823, I think, that the last fragment of our Royal Botanic Garden was removed from its situation on the West side of Leith Walk, and that the transplantation of the whole to its present site at Inverleith was completed. No garden could be made to walk a mile with less injury to its health, scarcely a single plant or tree was lost, and after recovering from the first sickness they looked fresher and prouder than ever." Cockburn gives credit for this to Professor Graham, "a respectable botanist," and to William McNab, "a most admirable man." In passing, Cockburn remarks that the Chair of Botany in Edinburgh is one of the best botanical prizes in Britain. "It was nearly about the same time," Cockburn continues, "that the Horticultural Society opened its kindred and adjoining experimental garden. Conducted as it was at first by such men as Ellis and Neill, it could scarcely fail, and has always done as well as low funds allowed. But flora and poverty make but a bad match."

In the meantime, in 1820, it is recorded that His Majesty the King had condescendingly agreed to become patron of the Caledonian Society. In the same year the Council appointed a Committee to endeavour to obtain for the Society a Royal Charter.

The work of preparing the garden was proceeded with, and donations of plants were received from all parts of the world. The Council then set about the raising of funds for the erection of glazed houses. Dr Andrew Duncan was very active in this connection, but whether or not this was to the Society's advantage it is difficult to say. He appears to have been something of a curiosity. Cockburn in his Memorials says of him that "he was one of the curious old Edinburgh characters. He was a kind-hearted and excellent man, but one of a class which seems to live and be happy and get liked by his mere absurdities. He was the promoter and president of more innocent and foolish societies than perhaps any man in the world, the author of pamphlets, jokes and epitaphs sufficient to stock the nation, all amiable and dull, and most of them very foolish. Yet, though his patronage was generally dangerous, and his talk always wearisome, nobody could ever cease to esteem him. He was even the president of a bathing club, and once at least every year did this grave medical

professor conduct as many of the members as he could collect to Leith, where the rule was that their respect for their chief was to be shown by always letting him plunge first from the machine into the water. He continued until he was past eighty a practice of mounting to the summit of Arthur's Seat on the first of May and celebrating the feat by what he called a poem. He was very fond of gardening and rather a good botanist; this made him president of the Horticultural Society, which he oppressed annually by a dull discourse. But in the last, or nearly the last of them, he relieved the members by his best epitaph being one upon himself. After mentioning his great age he intimated that the time must soon arrive when, in the words of our inimitable Shakespeare, you will all be saying 'Duncan's in his grave.'" Be this as it may, Dr Duncan's name will always be associated with the early history of this Society. Later on, it was decided to build a gardener's house, the estimate of which was £565. A gardener was appointed at the wage of £70 with an additional amount of 25 per cent. on his sales from the garden. Mr James Barnet, London, was appointed first Superintendent, and for several years, from 1824 onwards, the garden occupied the full attention of the Council as very little else is referred to in the minutes.

The first number of the *Gardener's Magazine*, presented by the editor, J. C. Louden, was laid on the table, 2nd February 1826, and on page 90 of this issue, which is in the Society's library, will be found, under the heading "Domestic Notices," a plan and full description of the garden. In his comments Mr Louden says that so far as he could judge it without inspecting the ground, the garden meets with his entire approbation. He considers it greatly superior to that of the London Society's garden in which a radical mistake had been made in having placed the arboretum in one compact mass instead of forming a belt of it to surround the garden. The ground plan of this arboretum, and especially the canal or river, were quite a caricature upon ornamental landscape.

The Society appears to have found the garden a strain on their resources, and various methods of raising money were resorted to. In 1830 a Promenade with music and dessert was arranged, but, unfortunately, a few days before that fixed for the Promenade, King George IV. died and a postponement had to be made.

In 1831 a Committee of the Town Council was appointed to

arrange for the planting of the banks of the Nor Loch. Owing to the state of the funds of the Corporation the greatest economy was indispensable, but the Society's experimental garden came to the rescue by furnishing such thinnings or weedings of the shelter trees in the garden as could with propriety be removed. The Society also undertook to subscribe £1 yearly towards the expenses of the Warriston police, which force at that time was maintained by private subscription.

The state of the funds was still troubling the Council, and various devices were resorted to with a view to increasing the revenue. Evening Promenades were held weekly, but this did not help in any degree. At these Promenades there was usually one or two military bands, which cost nothing more than a few tickets for the officers and their wives. Application was made to the Treasury to forego the rent, which had fallen into arrear. The Treasury agreed to make an annual payment of £200, but by the end of 1832 the position had become so serious that the awards had to be cut down by one-half. The publishing of Memoirs was discontinued, and the Society entered the nursery business.

At that time medals were awarded at Committee meetings for exhibits of flowers, fruit and vegetables, and it is of interest to note that the minute of the meeting of 26th April 1821, after detailing various awards, chiefly for auriculas, sets forth: "The boast of the day is still to be mentioned. This consisted of several fine plants of the Citrus tribe in flower and fruit. Instead of having their heads pruned into the shape of balls, these plants were of their natural graceful shape, but to those acquainted with the usual mode of cultivation of Orange-trees the surprise was not small when it was found that the largest plants (Seville and Myrtle-leaved Orange trees loaded with ripe and unripe fruit) were only four years from the bud or graft and that the plant now in flower was a cutting little more than a year old. These specimens were from the garden at Woodhall, the seat of Colonel Campbell, of Shawfield, near Holytown, and were carried to town by two of the gardeners on a hand-barrow covered with an awning." The Committee authorised the Treasurer to present half-a-guinea each to the gardeners who transported the plants so far in safety, and the Committee also paid 2s. 6d. to a young man who carried a green-fleshed melon from Pinkie.

In 1823 the names of James Cuningham, Comely Bank, and

Dicksons and Co., Leith Walk, appeared as exhibitors, the former of geraniums and the latter of roses, and in the same year it is recorded that a medal was awarded to Mr Thomas Inglis, of Barnton, for a new seedling melon of enormous size and weight (21 lb. 12 ozs.).

The first Royal Charter was obtained in 1824. Early in 1826 a gardener on an East Lothian estate sent seeds of tender border and greenhouse plants saved by him, with a proposal to communicate his mode of naturalising plants "on equitable terms." The reply was that the Society possessed no funds for "purchasing secrets."

In the late twenties animadversions on the management of the Society appeared in *The Scotsman*. The complaint was that its energies were directed too much to the scientific side of horticulture and neglected the practical side. As a result two minor societies sprang up in opposition to the Caledonian Society. One was the Amateur Edinburgh Florists' Society, and the other the Edinburgh New Horticultural Society. The Amateur society, as its name implies, was established by amateurs to promote the cultivation of florist flowers. No professional gardener was admitted to membership. The New society was formed by practical gardeners because the Caledonian, in their view, appeared to deal too much with the theoretical speculations of amateurs, and as it was chiefly composed of amateurs, and its business conducted by men of science, it failed to act as a centre of attraction and intercourse to the operatives of the profession. I have endeavoured to trace the further history of the two societies mentioned, but have been unsuccessful. Both appear to have died in infancy.

The gardener's house and committee room in the experimental garden were finished in the summer of 1826, and on the 15th June the Council met for the first time in the new committee room. Prior to this the meetings had been held at 21 St James's Square, or in the hall at the Royal College of Physicians. The latter is not to be confused with the Surgeons' Hall in Nicolson Street, which appears to have been built in 1832. There is a record in the Society's minutes that shrubs were supplied from the experimental garden to assist in planting the grounds around this new hall. The Physicians' Hall was at the end of George Street where the head office of the Commercial Bank now stands.

In 1826 the Committee came to the conclusion that the culture

of the tomato or love apple in Scotland deserved encouragement, and several varieties having been produced by the gardener at Kennet, a Silver Medal was awarded.

The first garden superintendent left at Martinmas 1836, under somewhat stormy conditions, and after he left a committee was appointed to make a report on his delinquencies. Among other things, he appeared to have defaced the wood-work and paint-work of the cottage—probably kept his accounts in that way—and he also left the Society's musket behind, fully loaded. This musket is not now one of the Society's assets. His successor was James McNab, a son of the famous McNab of the Royal Botanic Garden. The salary at this time was £80 with free house, coal and candles.

The first Dahlia Show was held on 6th October 1836. That this was considered by the Council to be an important event, is shown by the fact that whereas circulars regarding former shows were sent to members and shareholders within reach of the 1d. post, the circulars for this show were sent to all those within reach of the 2d. post. Of the show it is minuted that the collections of double dahlias were of the best description and very expensive, no fewer than 1494 flowers being placed on the stage. The show, however, cannot have been a success as the committee in charge found that the proceeds amount to about £13.

At the Promenade held on 11th July 1839, it is noted that there was no competition for strawberries, "it being understood that it was too much to stipulate for a pint basket of each of four different kinds." This, however, did not appear to apply to gooseberries, for eight years later 117 named varieties from the garden were placed on the Council table. Could this be done to-day? I am not forgetting the distinction between "kinds" and "varieties."

The publication of Memoirs of the Society, which had been carried out for some years, was discontinued in 1820 owing to lack of funds, but in 1839 it was felt that it was desirable that the communications to the Society should be published to the world "through a respectable medium." The old form of Memoirs was considered too costly, and consideration was given to the question of the Society establishing a cheap periodical, bearing some such title as "Scottish Gardening," or "Journal of Horticulture and Botany," in which the Society's communications should occupy a conspicuous place. To begin with the Journal

was to be published every two months at the price of 1s. 6d., but it was intended, ultimately, to be a monthly Journal at 1s. The prospectus of the proposed periodical was prepared, but like many other proposals this one came to naught.

In 1842 a proposal was made and adopted that the Society should have a Horticultural Hall, and with this in view a subscription list was opened, and plans and specifications were prepared. The dimensions of the Hall were to be, length about 60 feet and breadth 27 or 28 feet, the height of the ceiling to be left to the artist—who, as a matter of fact, used his freedom in this respect very liberally. The cost was not to exceed £650. The Hall was erected in the Experimental Garden, the Council having come to the conclusion that they would have no difficulty in raising the necessary funds. In this, however, they proved to be wrong, because they found great difficulty in raising the money, and ultimately had to resort to the Bank for assistance. It may be stated that from that time onwards the doom of the garden was sealed, as the Bank overdraft hung like a millstone around its neck to the end.

The Hall, however, was duly completed and the first meeting was held in it on 1st December 1842. At that meeting it was resolved that a marble bust of Dr Neill be executed and placed in the Hall. This Hall is now the Herbarium, and the dull prosaic use to which it is at present put is in sharp contrast to the bright scenes it must have witnessed in its earlier years. The bust, I believe, stood at the entrance until a few years ago, when it was removed to make room for yet another specimen rack. I expect the bust was taken over by the Government along with the other things in the garden, but one wonders whether, when we do get our Institution, we can have the bust returned and placed in the conspicuous position it deserves.

In conjunction with the Hall the Council proceeded to consider a proposal for a Winter Garden, and in 1848 active preparations were made to raise the funds. For this proposal, apparently, funds were more easily found, for a sum of £500 was subscribed by members in sympathy with the project, and the Council voted £100 which they could ill-spare. The estimate of cost was about £700, so that the difference of £100 went to add to the weight of the millstone. This Winter Garden and the other glasshouses were, I think, built somewhere in the neighbourhood of what is now the Rock Garden.

That Monthly Meetings were not a monopoly of the Scottish Horticultural Association is evidenced by the fact that in 1853 the Society decided to hold such meetings at which "seedlings, florist flowers and other novelties" were exhibited and communications on horticultural subjects read. These meetings, however, appear to have died a natural death after about three years. At this time the Society was financially in deep water, and the energies of the Council were directed towards increasing income and decreasing expenditure. This may account for the failure of the monthly meetings. The Council tried many expedients with a view to improving their finances, but those at the head of affairs seem to have lost heart. The Secretary, Professor Balfour, resigned, and the Superintendent of the Experimental Garden, Evans, was dismissed. A Committee was appointed to examine the Society's finances, and among other things recommended that the Society might be dissolved or the Experimental Garden handed over to the Government to be added to the Botanic Garden. It is interesting to note that at that time the number of men and boys employed in the Garden was eight, and the total wage bill £4, 8s. per week. It is to be regretted that the time and energy expended on the Garden did not yield better results so far as the Society is concerned, and one is inclined to blame those at the head of affairs for the seemingly reckless way in which serious financial obligations were undertaken. A great many additions to and improvements on the Garden were made without any clear idea of where the money to pay for them was to come from. Two "Camellia" Houses were erected at a cost of several hundred pounds, the sole object of which appears to have been the supplying of bouquets to members and shareholders at cheap rates. The Hall and Winter Garden did not justify their cost, and the money might have been employed usefully in other ways. Many alterations were carried out which might have been desirable had the Society money to spare, but which could have been done without. Looking to the whole circumstances, the Council did not exercise the common sense one would have expected, and while other factors might have to be taken into account, the policy adopted seems to have been "Take no thought for the morrow." Had a more conservative financial policy been pursued the Garden might in the end have achieved better results.

In 1856 the Garden was, as a matter of fact, offered to Govern-

ment by way of a Memorial presented to the Commissioner of Works. This Memorial makes very interesting reading. It sets out the objects for which the Garden was established, and then proceeds to say, *not* that it had become a serious burden on the Society's resources, but that "the Society now feel that the object for which the garden was established has been attained, and that they might now successfully trust to the exertions and energies of highly respectable Nurserymen and Florists for the future." Actuated with this feeling the Society were prepared to hand over the Garden on terms. The Government refused to consider the matter. This refusal compelled the Society to go once more into the whole matter, and the position was rendered all the more critical by reason of the Bank stopping the Society's credit. Further committees were appointed and numerous reports submitted, but it was found then, as it is now, that it is much easier to economise in theory than in practice.

Negotiations were then entered into with Peter Lawson and Sons with a view to that firm taking over the Garden under reservation to the Society of certain rights in it. These negotiations fell through as the parties could not agree on terms, and it was ultimately decided to send a deputation to London to wait on Lord Palmerston with a view to inducing the Government to take over the Garden. In the meantime things were going from bad to worse, and a statement prepared in December 1857, showed that the debts due by the Society amounted to £880 with only £200 in sight to meet them. A proposal to let part as a Market Garden was put forward, but held over pending the result of the deputation to Lord Palmerston.

That deputation, upon which so many hopes were built, failed miserably, for instead of inducing the Government to take the Garden, they received intimation that the Government's grant of £200 per year was to be stopped. No reason was given, but it can be surmised that the Treasury, looking round for ways and means to economise with a view to meeting the cost of the Crimean War, came to the conclusion that a certain saving could be effected, and as the Society was a Scottish one any outcry could safely be ignored.

As a reprisal the Society withheld the rent, and by 1864 the arrears had accumulated to £841. The Department of Woods and Forests then threatened action against the Society for recovery of the arrears of rent. Further frantic efforts were made

to induce the Government to take over the Garden, and ultimately it was arranged that they should do so. They agreed to take the Garden with the Hall and gardener's house, and pay the Society £1000, under deduction of arrears of rent, and on condition that the Garden be incorporated with the Botanic Garden. The transfer took place in 1864, and the Society's Garden is to-day part of the Royal Botanic Garden. While the extravagance of the Council may have been responsible for the unfortunate position which had developed, one cannot help coming to the conclusion that the Government took advantage of the situation to drive a very hard bargain. They took over what, after all, was a valuable asset in which the Society had sunk thousands of pounds, and all they really paid for it was a miserable sum of £158, 16s. The Government must have had in view that the Botanic Garden would extend in the natural course of events, and the Experimental Garden was lying ready for that purpose. It would have cost a great deal more than £1000 to incorporate virgin territory in the Botanic Garden.

Prior to this, however, arrangements had been made to hold an International Show In 1865 this Show was duly held. I have been unable to ascertain the financial results, but for some years after that the Society's activities seem to have been very much circumscribed. If the Council met no records of their meetings were kept, for only the Minutes of the Annual General Meetings appear in the Minute Books. After all the debts were paid the funds amounted to £57, 7s. 8d., along with a few plants which the Government kindly gave the Society liberty to retain and sell. The membership was very much reduced, and to all appearances the Society was a spent force so far as horticulture was concerned. A rival Society, the Edinburgh Horticultural Society, had appeared on the scene and rapidly extended its influence to the detriment of the Caledonian, which still pursued its antiquated methods.

A proposal emanating from the Edinburgh Society to unite the two societies was put forward. The object of the union was to put an end to the friendly rivalry which had existed. The union duly took place, and the Edinburgh Society brought a dowry of £317, so that the financial strain was eased for the time being at least. The following year, however, the September Show resulted in a serious loss, and half of the funds disappeared in that year. Drastic economies were then put into force, and during

the next ten years the funds gradually increased. With increasing income, however, expenditure also went up, and from 1878 onwards for four years a decrease was recorded. At this time the Society were holding three shows annually. Spring, Summer and Autumn. The Summer Show was given up, being the one which showed the worst return. In 1884 this Show was revived, but resulted in a loss of £174.

In the meantime, in 1869, an International Fruit Show was held, but no report regarding this Show has been minuted. Another International Show was held in 1875, and again no report appears in the Minutes, except that the accounts showed a loss of £88. In 1882 still another International Show was held with better results, a surplus of £100 being realised.

About this time another rival Society appeared on the scene, namely, the Scottish Horticultural Association. The aims and objects of this Association are still fresh in the memories of most of us, and so far as can be gathered the Royal Caledonian Horticultural Society appears to have ignored its existence for some years. Then it was found that their activities were overlapping in the matter of granting Certificates, and an arrangement was come to between the two that a joint committee should attend to the granting of Certificates for new plants. This was not a satisfactory arrangement for, in 1882, the Royal Caledonian resolved that in future each Society should grant its own Certificates. In 1887 it is minuted that the Scottish Horticultural Association approached the Society for a donation towards a Chrysanthemum Show, but the Council were of the opinion that "the Society were not at liberty to deal with their funds for such a purpose." By 1890, however, the Council had reached the length of lending tables and vases to the Scottish, which was one step in the right direction. This concession, however, was modified a few years later when the Scottish was asked to pay for the use of the tables.

In 1885 the Society organised an Apple and Pear Conference, and in 1889 a Plum Conference. The Reports on these two Conferences are to be found in the Society's Library. The late Malcolm Dunn, Dalkeith, was the moving spirit in both of these Conferences.

Further International Shows were held in 1891, 1905 and 1925.

A new Royal Charter to give the Society wider powers was granted in 1897, and the Society is still governed by this Charter.

For the first ten years of the present century the Society continued its activities in a somewhat stereotyped fashion, but about 1910 the Council and the Council of the Scottish Horticultural Association recognised that the work being done by the two Societies was overlapping. A proposal was put forward that the Societies might amalgamate, and a joint committee was appointed to investigate the position, and if possible decide upon some method of amalgamation. The Committee considered that there were only three alternatives, namely (1) for the Scottish to come over to the Caledonian, (2) the Caledonian to go over to the Scottish, or (3) to dissolve both and form a new Society. The first two alternatives were dismissed as impracticable as neither Society would agree to sink its identity in the other. The third alternative dissolution was more seriously considered, but it was found that the Caledonian Society's Royal Charter and the destination of certain of its Trust Funds stood in the way. The proposal was then dropped and remained in abeyance for ten years.

During the War years, 1915-1918, the Society did not hold Shows, but the Council directed its energies with a view to increasing the food supply of the country. Pamphlets dealing with the production of fruits and vegetables were prepared and issued. During this time also they carried out a census of Hardy Fruits growing in Scotland, but unfortunately did not have the funds to enable them to publish the result. An attempt was made to induce the Board of Agriculture to finance this work, but although the Board admitted that the information would be valuable they refused funds for the publication.

The Autumn Show was revived in 1920, and an attempt was made in 1921 to hold a Spring Show, but the result did not justify its continuance. It is to be hoped that the day is not far distant when it may be possible to revive this popular exhibition.

In 1930 the Society began an experiment with a Chrysanthemum Show, the ultimate result of which remains to be seen.

In 1920 the question of amalgamation with the Scottish Horticultural Association was again seriously considered, and this time less attention was devoted to technical objections, the parties concerned confining their attention to practical matters. The finances of both Societies were suffering from the strain of the war years, and as it was obvious that amalgamation was the only way to meet the situation, a method of carrying this into

effect was ultimately found. While many at the time expressed doubt as to the issue, I think it may safely be said that the step taken in 1920 was in the interest of horticulture generally. The work of both Societies was to be carried on under the name of the Royal Caledonian Horticultural Society with the addition of the name of the Scottish Horticultural Association.

That the Society has been moderately successful no one will deny, and such success as it has achieved has been in a great measure due to the men who have been at the head of its affairs, particularly in its early years. Looking back, we find men like Dr Patrick Neill, whose name will always be remembered for the great interest he took in everything pertaining to the Society; Dr Andrew Duncan who in spite of, or perhaps because of, the peculiarities which have been referred to, was able to draw to the Society men of the right sort; Ellis; the Macnabs, father and son; Jeffrey; Cockburn, and many other men notable in their day in other walks of life. The most eminent of all, however, from the point of view of the Society, was Dr Neill. So long as he was able to take an active part in the running of the Society's affairs he did so, and while he may have been responsible along with others for extravagant expenditure on the Experimental Garden, he was able to steer the ship of finance clear of the rocks upon which the Garden was ultimately wrecked.

For the practical working of the Garden, the Macnabs were the men upon whom the greater part of the burden fell. Macnab, the father, was connected with the Royal Botanic Garden, and his son was employed by the Society first as Assistant Superintendent and latterly as Superintendent. He ultimately succeeded his father. While he was in charge the affairs of the Garden were to a degree successful, and at that time the Garden was the whole or practically the whole work of the Society.

Later we have men who were eminent in their profession. It would be invidious to single out any one in particular, but I might mention a few names in passing. Malcolm Dunn, the man who did so much to bring the Society to the front as regards fruit, and who was the instigator and active force in the Apple and Pear and Plum Conferences. The Thomsons, from whom our present President is descended, and whose work he is worthily carrying on; the Lairds, John Downie, Methven and many others who contributed to the building.

Coming to more recent times—I refer to the period subsequent to the amalgamation with the Scottish Horticultural Association —we have had as Presidents men who gave us of their best. David King, John W. McHattie, and Robert Fife, than whom there were no harder workers, each in his own characteristic way. David King worked on the principle that if anything required to be done it was his duty to lead the way, and he probably did more than any other President to help the finances of the Society. He was direct in his methods, although at times he may have been unorthodox. At the date of the amalgamation it was found that the Scottish Horticultural Association had an overdraft from the Bank of something approaching £450. This the Bank refused to continue and threatened to sell securities they held to meet it. King took the matter up, and in his usual dogged manner, and with the willing help of the Council, raised the money within fifteen months.

John W. McHattie was the antithesis of King. He was very fertile in ideas, and he usually was able to find men to carry his ideas into effect. That method, however, also has its merits, and McHattie was able to keep his Council—and the Secretary—constantly at work.

Robert Fife was a happy combination of King and McHattie—a worker as well as a thinker. On him fell the heavy work involved in the 1925 International Show, and as one who was constantly in touch with him during and for the twelve months prior to that event, I can testify to the unselfish way in which he gave of his time and energy.

The succeeding Presidents of the post amalgamation period are happily still with us, and their record of good work is not yet completed, so that I do not require to refer to them further than to say that they are all men who worked whole-heartedly for the benefit of the Society.

So much for the past, but what of the future? We, like other Horticultural Societies, are suffering from the financial stress of the present day, and for that reason must hasten slowly with our development. We claim to be a National Society, and if we are to justify that claim we must work along national lines. To a certain extent we are doing this, but I fear something more must be done before we can hope to have our claim universally admitted. The name alone will not carry us far. What should be done is a question not free from difficulty. One could make

suggestions, but I have no desire to enter into what may be a very controversial subject. There is, however, one aspect of the Society's activities which will, at no very distant date, have to receive the serious consideration of the Council. I refer to the Autumn Show. It must be evident to every one who has had anything to do with that Show, that the Waverley Market is hopelessly inadequate from the point of view of accommodation. The situation of the Market could not be improved, and if it were only an acre larger, it would be a perfect Exhibition Hall. At the present time to fit the Show into the Market is like trying to fill a quart into a pint measure, and after his experience last month I am sure the Secretary will bear me out when I say it is a nightmare to run the Show there. The exhibitors have reason to complain that they do not have the facilities for displaying their stuff to advantage, and the public do not have an opportunity of examining it in comfort. The Town Council apparently do not appreciate the situation or, at all events, if they do they are in no haste to improve it. Admittedly it is not an easy task, but one surely not beyond their powers. What then is the alternative for the Society? Are we ruthlessly to cut down the Show? I hope not. If not we must go under canvas, and place ourselves at the mercy of our uncertain climate. If, however, we must take to canvas, are we, claiming as we do to be the National Society — to confine ourselves to Edinburgh, or are we, like the Highland and Agricultural Society, to go on circuit. It is for consideration whether the time may not soon arrive when we may find it advisable to arrange shows in various centres in Scotland. This would have to be done in co-operation with the Societies in the respective centres chosen, but it ought to be possible to arrange terms suitable to all parties.

There are, I know, many difficulties in the way, and I have no doubt the more closely the subject is studied the greater the difficulties may appear, but while I do not say the situation I have envisaged is a probability, it is a possibility, and we should be prepared to meet it if and when it arises.

In dealing with the Society's past history I have devoted a good deal of time to the Experimental Garden—too much you may say—but my excuse is that for more than a third of the life-time of the Society the Garden was the principal pre-occupation (I had almost said worry) of the Council. The question naturally

arises in our minds whether at some future date it might not be good policy on the part of the Society to disinter the bones of the old idea and clothe them anew in a somewhat less elaborate form. Clearly the time for that is not yet, but some future generation may see it. No one will deny that it would be a very useful adjunct.

If we take a look around the country at the present time we will find that the financial stringency is tending to eliminate altogether the old type professional gardener. The amateur increases in number year by year, and it looks as if within a comparatively short time horticulture will be represented by the Trade and the amateur. The Society will require to adapt itself to the changing conditions. The success of the shows depends greatly upon the Trade, although I by no means seek to minimise the assistance given by the gardeners and amateurs, and looking back over the past twenty-five years it will be found that while the Trade and amateur exhibits have both increased in numbers at the shows, the gardener—*i.e.* the professional gardener—the man who began an apprenticeship on leaving school and made gardening his life-work—is slowly but surely disappearing. It is a great misfortune to horticulture that it should be so, but the fact remains, and as I have said, the Society must change with the times.

I have referred to the Apple and Pear and Plum Conferences, and the Reports of them. Are those Reports which are nearly fifty years old not out of date, and does nothing require to be done by way of bringing them up to date? An Ex-President has organised Strawberry Conferences, but should this be left to an individual? Are there no other horticultural subjects which would be benefited by examination and discussion in the same way?

The culture of flowers, fruit and vegetables is daily becoming more and more a commercial proposition, and that is one of the reasons why the Society should spare no effort to assist in any possible improvement. I am speaking from a layman's point of view, and the "respectable" nurserymen and florists may say I am talking nonsense, but I do think the Society might be able to do something to assist those respectable traders by way of gathering information for the common good.

Then as regards the other objects of the Society, the Horticultural Institution is still a thing of the future, but I hope

the realisation of the dream of the Scottish Horticultural Association of twenty years ago may not be long delayed. The fund for this Institution is slowly but surely increasing.

The Certificates in Horticulture instituted a few years ago at the instigation of the late David Storrie have not been as popular as had been hoped for. Some consider that too much is expected of the young gardener, but if the Certificates are to be worth anything at all they must indicate that the holders have a knowledge of their profession above that of the average rank and file. The Society will require to consider whether something can be done to make the Certificates worth trying for.

Of the other subsidiary matters of the Society I need say very little. We have the Neill Prize—in memory of Dr Neill —which is awarded every second year to a distinguished Scottish Botanist or Cultivator. The list of recipients contains many distinguished names, not the least distinguished being that of the latest, Prof. Sir Wm. Wright Smith.

We have a Benevolent Fund, and the Harley Fund from which assistance is given to gardeners, their widows and orphans who are in need. One would like to see this assistance increased, and the time may come when this will be possible.

In conclusion I would remind you that the Society is finishing the 125th year of its existence. It is now, as it has been in the past, an institution which counts for something in horticulture. We have always been fortunate in having men at the head of its affairs who have devoted themselves wholeheartedly to the work of the Society, and I think I may say that their success in carrying on has been in a great measure due to the support they have received from the general body of the members. So long as this state of affairs continues I have no fear for the future of the Society. Doubtless many of our dreams and aspirations will not be realised, but if we continue to strive for improvement, we are certain to achieve something worth while.

13.—"THE GOLDEN FLOWER OF JAPAN"[1]

(The Culture of Chrysanthemums as practised at Holdenby)

By D. Cameron, Holdenby.

Before entering upon our method of culture I should like to make a few remarks regarding soils, situations and climatic conditions prevailing with us, which may assist you in following my talk.

Our soil is a red sandy loam. We are situated about 400 feet above sea-level, while climatic conditions are dry and have been very much so during the past two seasons.

Selection of Stock.—Early November may be said to mark the beginning of the chrysanthemum year, in so far as selection of stock must now be attended to.

Keen growers mostly take note of any outstanding colour in the various varieties. This we have done during the past twelve years, and in this way a good strain is worked up.

By the end of November when most of the flowers are over, all plants are cut down to within 15 inches from the pot. Many varieties which are shy at producing cuttings are turned out of their pots and the soil shaken off. The roots are placed close together in propagating boxes with some fine soil, just sufficient to hold them in position, lightly watered in, and placed in a warm house for a week or so. When they are seen to be making plenty of growths they are removed to cooler conditions. In this way good clean cuttings are secured. The first batch of cuttings are secured by mid-December and the second early in January.

Ordinary cutting soil well firmed into 3-inch pots is used, six or seven cuttings to each pot, medium cuttings are preferred. They are well watered in and allowed to drain before being placed in the case.

Treatment of Cuttings.—A temperature of 50 degrees is maintained, the lights are removed for an hour each morning for the first fortnight, after which a chink of air is left on all night.

At the end of four weeks, if all has gone well, they should be stood out and given more space near to the roof-glass.

A light spray during bright days will assist in keeping them going.

Fourteen days later they are removed to cooler conditions

[1] Paper read at monthly meeting held on 6th November 1934.

and as near to the roof-glass as possible. We fumigate at the least sign of greenfly.

By the end of January the first batch is ready for the first pot, while the second is attended to by mid-February.

The soil for first potting consists mainly of loam passed through a ¾-inch sieve, a little leaf soil, a sprinkling of soot and lime or Fos, all are potted off into 3-inch pots. No crocks are used. When potted they are placed pot-thick in a warm frame well up to the glass, which ensures sturdy growth. Well watered in, these plants require nothing more than a spray over during bright periods for the next week.

In five or six days they will require a little air, which is gradually increased as the plants become stronger.

Room the plants out as required and lightly fumigate to keep greenfly in check.

By the middle of March they will be asking for another pot. The soil for this potting is prepared at least a week beforehand.

Loam broken up again forms the bulk, adding fresh oak leaves, dry fresh horse droppings, the latter passed through a 1-inch sieve, a sprinkling of wood-ashes, a little medium charcoal, soot and lime rouble with any approved chrysanthemum manure. 4-inch pot to each hundredweight of loam.

Pot fairly firm to avoid the plants making sappy growth at this season.

Give each plant a stake which will support it until the final potting.

Return the plants to the frame, spray over and keep close for a few days. No general watering is done at this time until the plants dry out, a light shade is sometimes necessary. The ventilation is gradually increased until the lights are fully open.

Towards the middle of April, several varieties which require a long season of growth are pinched. Another set of varieties are attended to by the first week in May, while the others are allowed to make a natural break.

We prepare the soil for final potting about the end of April. Much the same compost as for 6-inch pots but in a much rougher state. We also use peat moss because our soil contains very little fibre and rather more No. 1 chrysanthemum manure is added.

After the compost has been well mixed it is allowed to lie for a week, then turned, and again the following week.

We are now in the middle of May when the most forward plants must be repotted.

In view of the fact that we are highly situated, medium firmness of potting is the rule. I contend that continual watering tends to harden the soil, and there is no doubt that a wet season suits us best.

The seasons 1933 and 1934 have been the most trying during the past twelve years.

When potting we allow space for top-dressing, which is attended to towards the end of July.

The plants are stood pot-thick in groups for a few weeks, during which time they are sprayed over three or four times a day. They should not require any water at the roots for the first three or four days, and then we give them a good drenching.

Many of the plants should now be making growth since being pinched. We allow plenty of growths to remain until they are at least 6 or 7 inches in length as this encourages root action, after which we reduce them gradually until three remain. Some varieties carry three good flowers, but the general rule is two flowers.

So soon as the plants are growing freely again we place them in their summer quarters. It is the rule to have the rows running north and south, but we are compelled to do otherwise. During a very hot season it can be readily understood that one side of the pot receives most of the sun's heat. To avert this during the past season we did not fix the plant stakes to the wire supports until the end of July, during which time every plant received a half turn every week. We were then compelled, owing to strong winds, to secure the plants.

All this time the plants are kept well sprayed, and feeding with weak soot water is begun.

The manure for top-dressing is the same grade as for potting. Towards the end of July the first buds are showing. This is one of the most anxious periods. No feeding should be attempted. The bud should be allowed to form slowly, and there should be no hurry in what is termed "taking the bud," because the slightest injury at this time will surely show itself three months later.

When the bud is swelling away nicely a light feed is given, then ten days later we give it a little stronger, and continue to do so until there is a nice bit of colour showing. In a season like what we have just had, soot water and liquid from the

cowsheds has been used at intervals to keep the plants from becoming too hard.

The plants are housed any time between the 14th and the end of September. The first operation after housing is fumigating for greenfly, this is most important. Should there be any sign of mildew, Campbell's Vaperiser must be used. Two doses being sufficient. No cultivator should be without this machine. During the first fortnight all doors and ventilators should remain open and paths kept damped down, then gradually reduce the air as the nights become colder, adding a little fire heat which keeps the air on the move.

We never close the house unless for fumigating, and never allow a plant to become dry. Damping is a sure result should a plant be allowed to dry out. During October when a good bit of colour is showing, we use the sun-blinds.

Many flowers which seem to scald or burn when exposed to the sun, is I think the result of over-feeding, and it is my opinion more flowers are ruined by over-feeding than under-feeding. Quality should be the watchword. The great qualities of a flower are size, shape, colour, firm petal and freshness. Any flower confirming to the two latter will stand cut in water a week or ten days.

A few remarks on preparing the flowers for exhibition may not be out of place.

At the National Chrysanthemum Society and all other shows in England, wires are allowed to prevent the stems from breaking, with a ring at the top, not more than three inches diameter. Foliage is stripped off, and chrysanthemum foliage added, this ensures the flowers remaining in good condition for several days.

When the flowers are cut, the wires are tied in position and the stems placed in water in an upright position. We use quart bottles, one flower to each.

The flowers are tied in the boxes close to each other, so that should there be any movement, all move as one and no rubbing takes place.

Some exhibitors use tissue paper, but I can see no use for this. As some here are aware our blooms have travelled to Edinburgh, and been none the worse. By paying attention to every detail success is almost assured.

NOTES.

PROCEEDINGS, ETC.,

OF THE

Royal Caledonian Horticultural Society

REPORT OF THE COUNCIL to the Annual General Meeting, on Wednesday, 9th January 1935.

THE Council has pleasure in submitting its Report of the working of the Society for 1934, which again records satisfactory progress in the affairs of the Society.

The average attendance at the monthly meetings was 163, which is a slight increase on the high record of last year. The Council desire to express their thanks to the lecturers for the past year who helped to make the monthly meetings so interesting and awaken public enlightenment in the science of horticulture. A notable feature has been the many beautiful and glorious displays by the Trade and members at the meetings. The Council hope that these monthly exhibitions will be continued, as they are appreciated by so many members.

In the Competitive Classes the Council regret to notice that the entries are not as representative of the various districts as they might be. They invite members to increase their number of entries. The Council, with the aid of Mr Robert L. Scarlett, C.D.A., last year's President, again promoted a very successful Strawberry Conference, with the same object of securing a better market strawberry than is at present grown in Scotland. The Conference was held at Sweethope, Musselburgh, on the 10th July, and an invitation was kindly extended to the Society. There was a large turn-out of members who enjoyed, amid glorious weather, a very delightful evening. The Council desire to thank Mr James W. Scarlett and his family for their kind hospitality.

An Autumn Show and a Chrysanthemum Show were again held in 1934. The Autumn Show was held on 12th and 13th September, and the Council were very gratified with the result. It was the 125th birthday of the Society, and the members presented their Society with an excellent birthday present—a record-breaking show. The number of exhibitors, competitors

and entries exceeded the previous record show of 1931. The opening ceremony was performed by Mrs Walter Elliot, who remarked in a delightful speech that "She did not think there was anything in the development of modern life which had done more to bring happiness and beauty into people's lives than the widespread development of gardening." She also presented the following principal prizes, namely: The Blackmore & Langdon Challenge Trophy for Begonias to H. Alderson, Hazlieburn Gardens, West Linton; the Thomson Challenge Trophy for Grapes to Allan Brotherston, Tyninghame Gardens, Prestonkirk; the John Phillips Memorial Challenge Trophy for Roses to Bannatyne & Jackson, Hamilton; the "Abol" Challenge Trophy for Dahlias to Robert Grant, Carriden House, Bo'ness; the "David Sharp" Challenge Shield for Vegetables to George Patterson, Doughty House, Chirnside; the *Daily Record* Gold Medal for Sweet Peas to G. Winton, Yetholm Gardens, Kelso; and the "Windolite" Trophy for the best exhibit in the Show open to amateurs and the trade to Messrs Dobbie & Co., Ltd. The attendance on both days was very satisfactory.

The Chrysanthemum Show was held on 22nd November. The Council regret that they could only hold the Show for one day owing to previous bookings of the Waverley Market. In spite of this the number of exhibitors and entries were slightly in excess of 1933. The Show was opened by The Countess of Elgin who made a charming speech. Lady Elgin also presented The Scottish Challenge Cup for Japanese Chrysanthemums to G. D. Campbell, Bannerfield Gardens, Selkirk; the Millgrove Challenge Trophy for Decorative Chrysanthemums to J. C. Lyle, Donibristle Park, Inverkeithing; the Ichthemic Challenge Trophy for Single and Double Chrysanthemums to H. Woolman, Shirley, Birmingham; the Cochrane Trophy for Japanese Chrysanthemums to D. Cameron, gardener to Lady Annaly, Holdenby, Northants; and the Young Challenge Cup for Perpetual-Flowering Carnations to Wm. Aitchison, Dunbar.

The Society's representative on the Horticultural Advisory Committee of the Department of Agriculture has reported to the Council as follows:—The Committee had a very successful year and dealt with "Strawberry Diseases," "Glass-house Industry" "Scheme for the Inspection and Certification of Narcissus Stocks," and various notes affecting the Horticultural Industry. They also dealt with the "National Mark Scheme for Tomatoes."

It is with deep regret that the Council have to record the death of Mr L. B. Stewart, Curator of the Royal Botanic Garden, Edinburgh, who has always been a staunch supporter of the Society.

It is a pleasure to report that two Societies have become affiliated to the Royal Caledonian Horticultural Society. The Affiliation scheme started two years ago, at the request of

several small horticultural societies, is designed to assist small societies in their activities. The Council hope that many more societies will take advantage of the many privileges offered.

An Abstract of the Accounts for the year has been circulated amongst the members. This shows that there has been an excess of Income over Expenditure of £14, 10s. 5d. and an increase of funds during the year of £134, 17s. 3d.

The Syllabus of Lectures, etc., for next session has also been circulated amongst the members, and it is hoped that the meetings will continue to be well attended.

The Council desire to thank the members of the various committees for their co-operation and assistance during the year. The following additions have been made to the membership in 1934:—

1 life member at £21.
3 life members at £5, 5s.
2 subscribing £2, 2s. annually.
8 subscribing £1, 1s. annually.
50 subscribing 10s. 6d. annually.
87 subscribing 5s. annually.

The Council confidently anticipates a substantial increase in the membership and in the activities of the Society for 1935.

AWARDS MADE BY THE SOCIETY IN 1934.

"David King" Medals are awarded at Monthly Meetings.

Large Gold Medals.

Allwood Bros., Haywards Heath, Sussex, for Carnations.
Austin & M'Aslan, Ltd., Glasgow, for Vegetables, Gladioli and Sweet Peas.
City Parks Department, Edinburgh, for Ornamental Garden.
City Parks Department, Edinburgh, for Begonias.
City Parks Department, Edinburgh, for Chrysanthemums.
Cobley, Seymour, Ltd., Devon, for Collection of British Grown Bulbs.
Cyclamen Growers and Horticulturists, Luton, for Early Flowering Chrysanthemums.
Dicksons & Co., Edinburgh, for Roses.
Dicksons & Co., Edinburgh, for Conifers.
Dobbie & Co., Ltd., Edinburgh, for Collection of Gladioli and Dahlias.
Dobbie & Co., Ltd., Edinburgh, for Chrysanthemums.
Keeling & Sons, A. J., Bradford, for Orchids.
Laird & Dickson, Edinburgh, for Collection of Rock Plants and Alpines.
Storrie, Thyne & Co., Ltd., Dundee, for Hardy Herbaceous Plants and Dahlias.
Wilson & Co., Ltd., Prestonfield, Craigmillar, for Cyclamen.
Wilson & Co., Ltd., Prestonfield, Craigmillar, for Cyclamen, Begonias, and Chrysanthemums.

Gold Medals.

Bannatyne & Jackson, Ltd., Hamilton, for Dahlias.
Bell, Fred. J., Whitley Bay, for Pansy and Viola Blooms.
Croll, Ltd., D. & W., Dundee, for Dahlias.
Daniel Bros., Ltd., Norwich, for Montbretias, Gladioli, etc.
Dicksons & Co., Edinburgh, for Fruit Trees and Bushes.
Dobbie & Co., Ltd., Edinburgh, for Potatoes and Fruit Trees.
Engelmann, Ltd., Essex, for Carnations.
Forbes (Hawick), Ltd., John, for Hardy Herbaceous Phloxes, Pentstemons, Dahlias, etc.
Jeffrey, Thomas, Edinburgh, for Shrubs.
Keeling & Sons, A. J., Bradford, for Orchids.

Laird & Dickson, Edinburgh, for Rock Plants and Alpines.
Lawrie, R., Carnwath, for Begonias.
McGredy & Sons, Samuel, Portadown, for Roses.
Oliver & Hunter, Moniaive, for Colchicums, Heather, etc.
Scarlett, James W., Musselburgh, for Vegetables.
Scarlett, R. L., Musselburgh, for Invention of Buncher.
Torrance & Hopkins, Busby, for Chrysanthemums and Dahlias.
Ward, Alex., & Sons, Paisley, for Chrysanthemums.
Young & Thomson, Edinburgh, for Ornamental Garden.
Young & Thomson, Edinburgh, for Ornamental Garden.

"David King" Gold Medals.

Alderson, H., West Linton, for *Primula obenoi.*
Austin & M'Aslan, Ltd., Glasgow, for Chrysanthemums.
Dicksons & Co., Edinburgh, for Roses.
Dobbie & Co., Ltd., Edinburgh, for Gladioli.
Dobbie & Co., Ltd., Edinburgh, for Michaelmas Daisies.

Silver Gilt Medals.

Aitken, Peter, Bathgate, for Rock Plants and Alpines.
Downie, Ltd., John, Edinburgh, for Soft Fruit, etc.
Fairley, Jas., Cairniehill, Fife, for Roses and Phlox.
Hewitt & Co., Solihull, Warwickshire, for Delphiniums and Herbaceous plants.
House & Son, Isaac, Bristol, for Scabious, Trilonias, etc.
Mair & Sons, George, Prestwick, for Gladioli.
Maxwell & Beale, Broadstone, for Small Rock Garden.
Methven & Sons, Thomas, Edinburgh, for Ornamental Garden.
Methven & Sons, Thomas, Edinburgh, for Ornamental Garden.
Storrie & Storrie, Ltd., Glencarse, for Fruit Trees and Flowering Plants.

"David King" Silver-Gilt Medals.

Dicksons & Co., Edinburgh, for Daffodils.
Wilson & Co., Ltd., Craigmillar, for Cyclamen.

Silver Medals.

Aitken, Peter, Bathgate, for Rock Plants and Alpines.
Bannatyne & Jackson, Ltd., Hamilton, for Shrubs and Roses.
Carvel & Wylie, Newton Mearns, for Alpines.
Castlehill Nurseries, Kippen, for Alpines.
Edrom Nurseries, Edrom, for Alpines.

Forbes (Hawick), Ltd., John, for Geraniums and Carnations.
Gibson & Co., Leeming Bar, for Iceland Poppies.
Leightons, Glasgow, for Zinnias.

"David King" Silver Medals.

Armstrong, David, Gilmerton, for *Primula malacoides* (varieties) and *Lackeralia.*
City Parks Department, Edinburgh, for Begonia Mrs Petersen.
City Parks Department, Edinburgh, for Herbaceous Calceolaria.
Corsar, K. C., Edinburgh, for Auriculas.
Dicksons & Co., Edinburgh, for Crocus and Hyacinths.
Dobbie & Co., Ltd., Edinburgh, for Daffodils.
Dobbie & Co., Ltd., Edinburgh, for Pyrethrums.
Glass, F., Murrayfield, for *Primula Winterii.*

Bronze Medals.

Sims, Stephen, Draycott, Derbyshire, for Alpines.
Thomson, Fairbairn, Edinburgh, for Bowls of Bulbs, etc.
Tillie, Whyte & Benvie, Edinburgh, for Ornamental Gardens.

Cultural Certificates.

Fortune, T. A. S., Davidson's Mains, for Saxifraga.
Gray, T. J., Edinburgh, for Saxifraga.
Scarlett, J. W., Musselburgh, for Self-blanching Celery.
Smith, J., Edinburgh, for Cineraria.

Awards of Merit.

Austin & M'Aslan, Ltd., Glasgow, for Rose "Helen Smellie."
Dicksons & Co., Edinburgh, for Rose "Hazel Alexander."
Geddes, Wm., Rumbling Bridge, for Double Sidalcea "Minnie Geddes."

PRIZEWINNERS AT MONTHLY COMPETITIONS IN 1934.

6th February—One Pot Tulips	1. T. Braidwood, Colinton.
Vase Cut Flowers	1. S. Suttie, Edinburgh.
	2. D. Eggo, Balerno.
6th March—One Pot Cyclamen	1. D. Eggo, Balerno.
	2. A. Brotherston, Prestonkirk.
One pot Hyacinths	1. S. Suttie, Edinburgh.
	2. T. Braidwood, Colinton.
	3. N. Leyden, Lasswade.
One pot Narcissi	1. S. Suttie, Edinburgh.
	2. T. Braidwood, Colinton.
3rd April—One Pot Cineraria	1. S. Suttie, Edinburgh.
	2. J. Smith, Edinburgh.
Two Pots Primula (any Species)	1. H. Alderson, West Linton.
	2. B. McWeeny, Colinton.
Two Pans Alpines (Grown in Pans)	1. T. A. S. Fortune, Davidson's Mains.
	2. T. J. Gray, Edinburgh.
1st May—One Pot Schizanthus	1. H. Alderson, West Linton.
5th June—One Vase Cut Flowers	1. S. Suttie, Edinburgh.
Two Vases Lupins	1. W. Swan, Edinburgh.
	2. J. A. Sword, Cramond.
10th July—Two Vases Roses	1. S. Suttie, Edinburgh.
Two Vases Sweet Peas	1. J. S. Beddie, Jedburgh.
12 Strawberries	1. Miss Brodie, Edinburgh.
4th Sept.—Two Vases Dahlias	1. R. Aitchison, Inveresk.
	2. J. B. Herkes, Edinburgh.
2nd Oct.—Two Vases Early Flowering Chrysanthemums	1. R. Grant, Bo'ness.
	2. S. Suttie, Edinburgh.
Two Vases Michaelmas Daisies	1. T. J. Gray, Edinburgh.
	2. N. Leyden, Lasswade.
6th Nov.—Two Vases Decorative Chrysanthemums (Disbudded)	1. D. M'Lure, Craigmillar.
	2. W. Lamb, Edinburgh.
One Vase Incurved Chrysanthemums	1. W. Scott, Musselburgh.
	2. H. R. M'Glashan, Musselburgh.
4th Dec.—One Vase Single Chrysanthemums (Disbudded)	1. S. Suttie, Edinburgh.
	2. J. R. Nichol, Liberton.
One Vase Chrysanthemums (any Variety)	1. H. R. M'Glashan, Musselburgh.
	2. S. Suttie, Edinburgh.

AFFILIATED SOCIETIES.

The Armadale Society.
The Ayton Horticultural Society.
The Colinton Horticultural Society
The Currie Parish Horticultural and Industrial Society.
The Dalmarnock Society.
The Department of Health for Scotland Horticultural Society.
The Edinburgh Working Men's Flower Show and Industrial Society, Ltd.
Falkirk Horticultural Society.
The Helensburgh and Gareloch Horticultural Society.
The Leith Flower Show Society.
The Liberton Horticultural Association.
The Linlithgow and District Horticultural Society.
The Loanhead Horticultural Society.
The Melrose Association.
The Musselburgh Society.
The Rosewell Horticultural Society.
The Roslin Society.
The St Bernard's Allotment Society.
The St Leonard's Garden Allotments Association.
The Scottish Rock Garden Club.
The Winchburgh and District Allotment Holders and Industrial Society.

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